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# new trail

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# new trail

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**Contents**


2 Near Eastern and Classical Antiquities: the W.G. Hardy Collection
*by Shel Wilson, New Trail Staff*

4 Silver and other organisms
*by Esther Fraser, New Trail Staff*

8 Gary Geddes: Writer-in-residence
*by Greg Hickmore, New Trail Staff*

12 The green revolution: modernization of agriculture in developing countries
*by C.F. Bentley*

17 What kind of Trail?

18 The Alma Mater Fund: a habit of giving

20 Campus Reporter

24 The Alumni



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*New Trail* is the University of Alberta magazine. Its purpose is not only to maintain contact with the alumni, staff, and friends of the University, but to foster their interest in and concern about the University and higher education generally. To this end, it publishes news about the University and its alumni and topical articles about various facets of University life, higher education, and a vast range of matters which emerge from the thought and work of University staff.


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## Near Eastern and Classical Antiquities: the W.G. Hardy Collection

*by Shel Wilson, New Trail Staff*

Over the years the University has acquired, through donation or sometimes purchase, a great many collections of objects of aesthetic, instructional, or historical value. Far from being displayed, many of these collections lay neglected and deteriorating in boxes and cabinets in various corners of the campus, for want even of adequate storage. Recently, however, say in the last decade, the University and faculties and departments owning collections have become increasingly aware of the value of preserving and displaying these objects. Owner faculties and departments may now help themselves to the enthusiasm and experience of the University Collections Committee should they want to create a display.

This the Classics Department did. About three years ago the Department, with encouragement and funds from the University Collections Committee, initiated work that culminated in the opening in early June of this year of the W.G. Hardy Collection of Antiquities, and in the publication by the University Press in September of *Near Eastern and Classical Antiquities*, a guide to the Collection written by Jeremy Rossiter and Diane Dillenbeck of the Department. W.G. Hardy, whose name the display takes, was Head of the Classics Department from 1938 until his retirement in 1964. The display represents a small portion of the antiquities owned by the Department and includes the best of the Menzies collection of Near Eastern antiquities (named for Reverend J.M. Menzies whose sister Margaret Judge donated the collection to the Department in 1964), Greek pottery purchased by the Department, Greek and Roman coins, some purchased through G. Hermansen, retired Classics Professor, and Roman glass purchased in 1954 by Dr. Hardy from the Norton Collection in Boston, as well as a few donated pieces.

Work on the Collection began when Classics graduate student Clay Carter undertook to catalogue each piece; Jeremy Rossiter, also a graduate student, continued the cataloguing supported by a grant from the University Collections Committee. Very little restorative work had to be done on the display pieces, only some gluing, which was done by Mr. Rossiter and Ms. Dillenbeck,

# Near Eastern and Classical Antiquities

## The W.G. Hardy Collection

another graduate student. The Collections Committee again provided funds for the display proper: the cabinets were specially made by a design company; the graphics, illustrations and descriptions that guide the viewer through the Collection, were designed by Susan Nash and other students of the Department of Art and Design. J.G. Schovanek of Classics acted as supervisor of the project.

When the display was being put together, J.M. Parker, University Archivist and then Chairman of the Collections Committee, suggested that a companion catalogue might be compiled. Again, that Committee, along with the Faculty of Arts, provided funds. The University Press agreed to publish the catalogue, *Near Eastern and Classical Antiquities*. The catalogue, certainly enriching to the viewer of the Collection, can equally stand on its own; its drawings and photographs are impeccable and informative, as is the main text written by Mr. Rossiter and Ms. Dillenbeck (with help from Dr. Schovanek and A.M. Small of Classics) and the appendix on Greek and Roman coinage by T.N. Ballin, also of Classics. Indeed, its whole design is excellent. The catalogue, costing $3, is available from the University Bookstore.

One of the reasons that faculty and department collections have not so far been made widely accessible to the University community may be that their use as instructional aids has not been explored. The Hardy Collection has now been integrated into some Classics courses, the catalogue being used as a text. To actually see these objects, items of daily use such as drinking cups, lamps, coins, is much more telling than to simply hear about them. As one looks at the pieces on display, one is also looking at fragments of the daily life of the Ancients. The earliest pieces are dated circa 4000 BC, the latest circa 500 AD; following from one cabinet to another this span of some four thousand years, one can ponder the evolution of civilization. For most of these artifacts represent the enormous organization required of cities, of specialization, of "mass production."

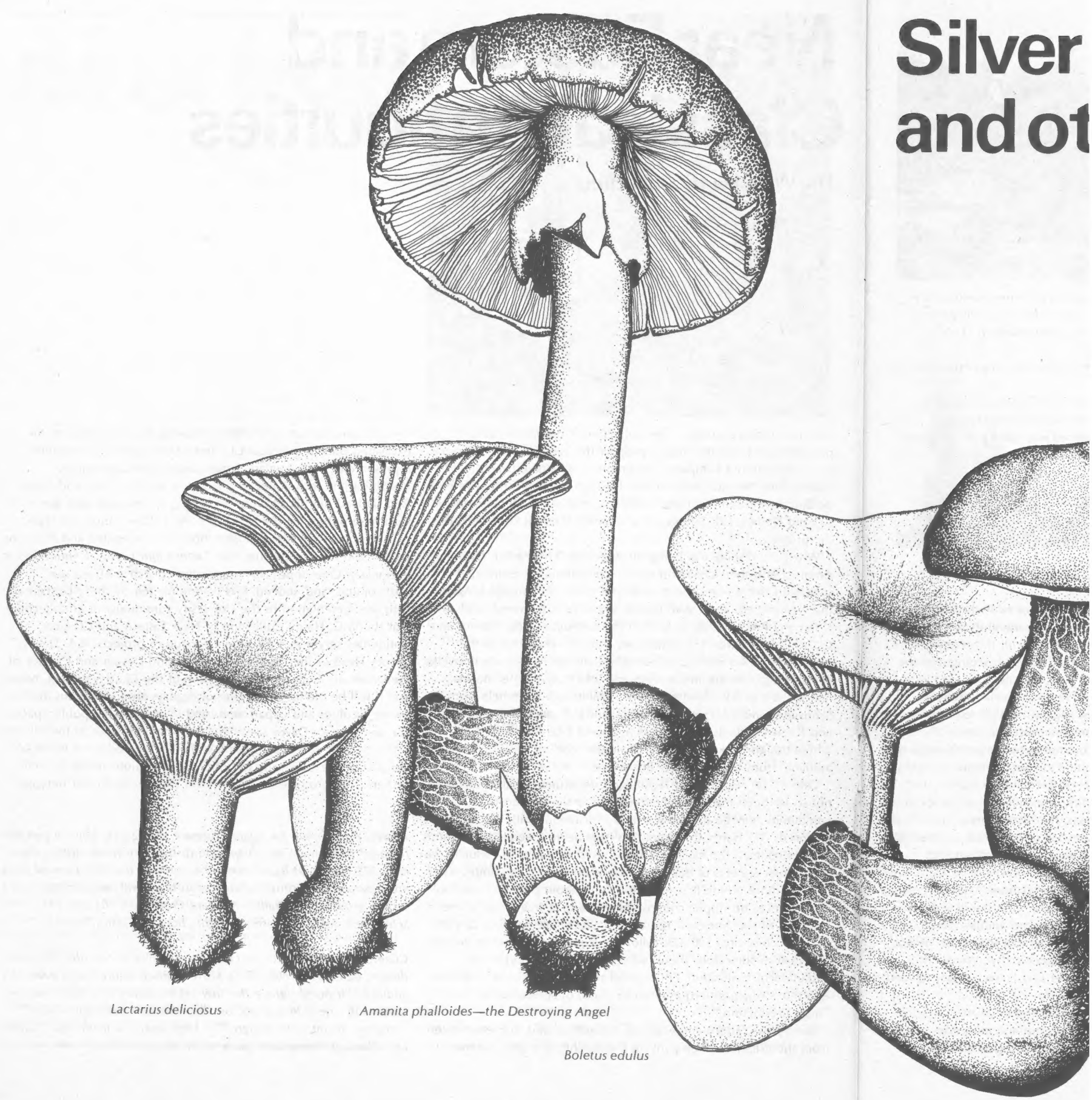
From *Near Eastern and Classical Antiquities,* and to a lesser extent from the graphics accompanying the exhibit, one gets the more solid information on which these musings feed: histories of the excavated sites in the Near East and of the Classical antiquities represented—pottery, glass, lamps, coins—and appendices describing the techniques of producing pottery, glass, and coins. And, indeed, the illustrations and plates of the catalogue are a worthy substitute for the actual pieces, if those cannot be seen.

The cooperation that brought about this interesting and eloquent display and the companion *Near Eastern and Classical Antiquities* is exemplary. One hopes that more such collective efforts are forthcoming; and, indeed, it is commonly felt by those concerned with the presentation to the University community of its collections that the W.G. Hardy Collection of Near Eastern and Classical Antiquities serves as a precedent for future projects. R.A. Davey, former Head of the Department of Art and Design and Curator of the University Collections at the time of the Classics project, hopes that it will be the first in a series of displays around campus, both in owner faculties and departments and in any suitable public space. For, as Professor Davey says, "The important message to the Alumni is that . . . the Classics display is a sign of the collective effort on the part of the University to honor the donations made by well-wishers." And to give us a most vivid experience of our heritage.

**Above.** *A.M. Small, Associate Professor of Classics, holds a partially restored* lekane, *a Corinthian-style dish of uncertain origin, dated circa 575 BC to 550 BC. Around the curve of the dish pairs of lions are separated by sirens, the figures in black with red additions on a brown ground. T.N. Ballin, Assistant Professor (left) and J.G. Schovanek, Assistant Professor (right), both of Classics, look on.*

**Cover.** *The cover illustration is of an* aryballos *of Middle Corinthian design, dated circa 600 BC to 575 BC. Black figures with painted additions in purple grace the tiny (11.6 centimeters high) scent bottle; on one side a swan, on the other a "quadruple lotus complex" of intricate design. The photograph is from* Near Eastern and Classical Antiquities *(plate 47).*

# Silver
# and ot

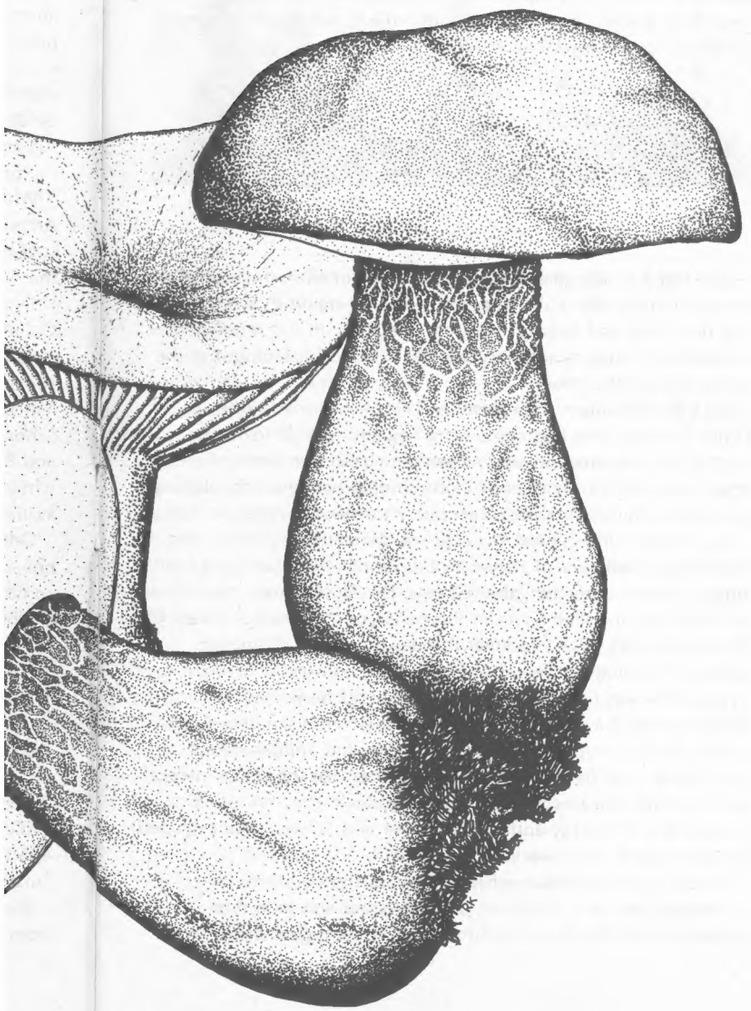


*Lactarius deliciosus*

*Amanita phalloides—the Destroying Angel*

*Boletus edulus*

# Silver and other organisms



*By Esther Fraser, New Trail Staff*

"Silver" is an unusual name. And Dr. Silver Keeping (nee Dowding) is a remarkable woman.

Receiving her MSc at the University of Alberta in 1924, she became instructor and lecturer in botany, and thus one of the earliest women to teach at the University in a discipline other than the traditionally feminine ones, Nursing and Home Economics. Fifty-two years later when asked to comment on the fact that surely twenty-three was very young for such responsibility, she remarked with characteristically wry humor: "I was so young I was practically unconscious!"

Even when she realized that she was pioneering in a field dominated by men, she continued, tenaciously, to develop her marked ability in science and to nurture her consuming interest in organisms.

Memory takes her back more than seven decades—to a solitary little girl, lovingly and musingly making daisy chains and twenty years later—to a young botanist wandering in a spruce forest "ankle-deep in mosses. Everywhere there were mushrooms . . . one like a great, fat, brown sponge on the end of a heavy stipe" covered with black lacings: *Boletus edulus.* Another "stood in slender pallid symmetry": *Amanita phalloides,* the Destroying Angel. And yet another, "a sweet smelling thing resembling half a canteloupe, brilliant orange with concentric rings: *Lactarius deliciosus.*"

She became a mycologist, a specialist in that branch of botany concerned with the study of fungi.

In the twenties and early thirties the University was a small community with an academic staff of about one hundred. There were carefree days with colleagues: a memorable occasion, a night spent at Cooking Lake where they sang round the campfire, read a play by lantern light, made cocoa at four in the morning, and skated hand in hand over the lake at dawn.

During the summer some of them would "dress in rough clothes,

**Left,** *Silver when she received her MSc and became an instructor in botany at the age of twenty-three. Five decades later, reflecting on the responsibilities she had undertaken, she remarked: "I was so young I was practically unconscious."*
**Above,** *Some of the perils encountered by early ecology expeditions in Alberta's muskegs.*
**Right,** *"Witches Brooms" on spruce and pine, caused by a parasitic mistletoe whose seeds explode like miniature cannon to infect neighboring trees. When Silver wondered why some mistletoe never produced seeds, she discovered a fascinating fungus.*

throw axes, tents, and food into cars" and set out to investigate the ecology of Alberta, "being sure to take rope and chains for being pulled out of the mud." Between Edmonton and Whitecourt they found rolling sandhills interspersed with muskegs where pine and spruce trees were infected with mistletoe which stunted growth. The tuft-like branches are called "Witches Brooms." When the mistletoe fruits ripen they explode like miniature cannons, sending sticky seeds to infect neighboring trees. The observant scientists found that some mistletoe never produced seeds because it in turn seemed to be infected with a fungus.

In the laboratory Silver tried to grow the fungus. "It was a very trying fungus; it wouldn't grow on potato agar; it wouldn't grow on pine-needle agar. It would only grow on mistletoe agar." She finally got cultures. Then the theory had to be tested. Would it infect the mistletoe? Back in the field "it was a ticklish business getting up the trees to smear the fungus on the tiny mistletoe flowers." She studied and wrote papers on this fungi on and off for seven years. The practical application of all this work? A contribution to the body of knowledge which helps to preserve our forests.

In 1928, recipient of a travelling scholarship from the University Women's Club, she went to Cambridge. She couldn't realistically expect to get her degree in a year but she "learned a lot of other things" in that cosmopolitan environment: meetings at "the Heretics Club, theatres and museums in London and Paris," and the stimulation generated in a great community of scholars at a time when the theory of evolution was the subject of spirited discussion.

Returning to Canada, she had the choice of two scholarships and chose the one where she got "the very best training" working for her doctorate and later as research assistant with the renowned scholar and inspiring teacher, Dr. A.H.R. Buller, mycologist at the University of Manitoba.

Back in Edmonton, in September 1933 she married Professor Frank Keeping who had come from England in 1929 to teach mathematics at the University. Keenly interested in her work, he encouraged her lively interest in continuing her research, although as wife of a faculty member she couldn't expect to receive a salary.

Dr. Harold Orr, Clinical Professor of Dermatology, urged the Provincial Laboratory of Public Health to examine skin tissues for ringworm and other fungal infections. Dr. Allan Rankin, then Dean of Medicine, installed Silver in Room 168 of the Medical Building. There she worked as a pioneer in one of the first diagnostic medical mycology laboratories in the Commonwealth.

Soon she was making forceful recommendations. "In our laboratory we have made some progress in understanding fungi which produce superficial diseases in man and animals. Now something must be done about those fungi that infect the viscera and produce diseases resembling tuberculosis. . . . We need someone with energy and curiosity over and above what is needed for everyday routine work."

Silver has a passionate conviction about the need to communicate—with scientists, of course, but also with non-scientists. In spite of the fact that she has been deaf since

childhood she communicates lucidly and wittily, captivating audiences with fascinating accounts of the organisms she finds so engrossing.

Speaking to Public Health Nurses in 1940 she said: "If I discover something interesting my first instinct is to tell someone about it. I am apt to wander about university halls with a glittering eye, like the Ancient Mariner looking for a wedding guest."

One afternoon in 1946 she was "setting up an exhibit of slides and cultures of systemic fungi, hoping to interest physicians from tuberculosis sanitoria who would be in the building next morning." In the corridor she "collided with six members of the National Research Council looking for a project to finance. The result of the encounter was a grant to pay an assistant" for the Medical Mycology Laboratory.

In 1947, addressing the University Women's Club, she began: "It has been rumored that a certain Garneau matron was seen in the vicinity of Lethbridge, clad in breeches and knee boots setting mousetraps beside haystacks. It is only fitting that she be asked to give an account of herself."

Those were not rumors. That *was* what she had been doing.

She travelled with medical students, catching small rodents for the Department of Public Health. Back in the lab hundreds of specimens arrived: 275 rodent lungs collected from a one-thousand square-mile area, from Lethbridge to Peace River. Why were all those collections being made?

It was Silver's idea. The University had found the person "with energy and curiosity over and above what is needed for routine" work.

"Thirteen rodent lungs contained pearl-like grains," cells of fungi visible to the naked eye, and cultures from these infected lungs produced a remarkable fungus. The first report of it had come from Arizona five years earlier; the Alberta discovery was a distinctly different strain whose spores when inhaled into rodent lungs swelled to enormous size.

This peculiar Alberta strain was then discovered in Montana and subsequently in other areas of the United States, in Europe, and in Asia. In 1969, in Czechoslovakia the same large spores were reported in the lungs of human patients, often with pathological changes in the surrounding tissue. At least one of the cases was fatal.

In 1933 a geologist at Fort Churchill had sent her a specimen from which, in "the Golden Year" of 1939 she cultured the fungus which was "mine alone!"—*Gelasinospora cerealis*. "It grew vigorously. . . . It completed its life-cycle in less than a week. Just think of the genetical experiments that we could carry out! It was a river of life." Under the microscope she watched the protoplasm stream from cell to cell; she carefully measured the incredible rate of speed of nuclear migration and "Dr. Buller came from the East to see this and found that it was so." Sixteen years later she had a film to show the *Cytoplasmic Flow of Gelasinospora* at the Imperial College of Science and Technology at the University of London.

These are only a few of the fungi Silver has studied. When her assistant, J. William Carmichael, returned from Harvard with his PhD in 1954 she resigned and he took her place in the Department of Medical Mycology. He paid tribute to her for "the tremendous job" she had done "in interesting Alberta physicians and public health men in medical mycology." For twenty years she had collected cultures which formed the nucleus of today's University of Alberta Mold Herbarium and Culture Collection which is recognized all over the world.

For another two decades she continued as Honorary Research Associate in the departments of Medical Bacteriology, Botany, and Genetics. The position carried no salary or tenure; she paid her own expenses to scientific meetings. At seventy-one she attended the first International Congress of Mycologists.

Although until recent times attitudes toward women participants at these meetings were never completely free of bias, Silver was accepted; her dedicated, meticulous work, her zeal for investigation, and her vivid scientific imagination in a wide diversity of fields won respect.

The study of fungi has become increasingly important since the discovery of antibiotics—chemical substances produced by these organisms. With the progress of knowledge about compounds which impede bacterial infections, mycology will become even more vital. Most organisms are opportunistic; yeast and fungal infections may become more widespread. Control will depend on exact, detailed knowledge of these causal agents of disease. In her pioneering work Silver has left the University a valuable legacy.

And her rewards? "A life of such biological study is rich in the discovery of facts. It is also rich in lasting pleasure. Students of pine trees, mushrooms, and tiny fungi might say with Keats:

'Therefore, on every morrow are we wreathing,
A flowery band that binds us to the Earth.'"

And it all began with a little girl making daisy chains.

# Gary Geddes

## Writer-in-residence

*By Greg Hickmore, New Trail Staff*

A few years ago, everywhere you looked, someone was making some sort of statement about Canadian cultural nationalism, especially about Canadian literature. Many extreme positions were taken; many people dismissed the issue. It was a time of powerful feeling about our national literature and it was a time for powerful annoyance by those who didn't think it was important. What has happened? Has the issue become unimportant? Probably not. It is more likely that the talking is over and the doing is taking place. There is, of course, some danger that there has not been enough talking, that things have not been considered carefully enough by those with a strong commitment to Canadian literature.

Gary Geddes, this year's writer-in-residence, has a strong commitment to Canadian literature. When he speaks of our literature in general, the lax attitudes of departments of education toward the teaching of Canadian literature, the terrible state of journalistic criticism in Canada, the reluctance of Canadian universities to treat Canadian literature as seriously as they should, or the amazing lack of interest most Canadians display toward their own literature and culture, Geddes speaks with a partisan's enthusiasm. But Geddes also has a strong commitment to being reasonable and sensible about Canadian literature. He tries to see the various aspects of the issue, looking at them from his diverse range of experience in the field, tries to achieve what he describes as "some sense of balance." Geddes's background—he is a poet, an anthologist, an editor, a reviewer and critic, and has been an academic and teacher at various times—serves him well in his effort to achieve that balanced view.

Geddes comes to the University of Alberta from Victoria, where he has lived the last few years. He was born in 1940 in Vancouver, spent a few years on a Saskatchewan farm near Yorkton, and was educated at UBC, Reading University in England, and the University of Toronto. He has held teaching positions at various colleges and universities throughout Canada, including Toronto, Trent, Carleton, York, Victoria, Ryerson, and the British Columbia Institute of Technology. Geddes is perhaps best-known in academic circles for his editing and anthologizing.

His *Twentieth Century Poetry and Poetics*, which covers a wide range of British, American, and Canadian poets and includes a representative sampling of theoretical statements by major poets, is widely used in universities throughout the country. Another anthology, co-edited with Phyllis Bruce, *Fifteen Canadian Poets*, offers the reader a good selection of Canadian poetry. There are older, established writers like Birney, Layton, Raymond Souster, Margaret Avison, and Al Purdy; there are mid-career poets like Alden Nowlan, Leonard Cohen, D.G. Jones, and Eli Mandel; and there are younger writers like Margaret Atwood, John Newlove, George Bowering, Gwendolyn MacEwen, Victor Coleman, and Michael Ondaatje. The editors say in their preface that they hope "the book reflects what is happening in the art itself," and the anthology at any rate does provide an interesting cross-section of Canadian poetry and is used in a number of Canadian literature courses as well as freshman survey courses in many universities.

Geddes's most recent anthology is a collection of writings entitled *Skookum Wawa: Writings of the Canadian Northwest*. "Skookum wawa" comes from the Chinook, "a trade language developed by the Hudson's Bay Company to facilitate their dealings with the numerous tribes and language groups in the Pacific Northwest," Geddes explains in the preface to this book. "Skookum wawa" can be translated loosely as "strong talk" or "strong words." The anthology contains poems, stories, excerpts from historical writings, and many other examples of the literature of the northwest that serve to present the region from a number of different viewpoints. It is a book that Geddes hopes can be used in British Columbia schools to encourage students' interest in their own region, it's literature and culture.

Geddes's involvement in Canadian literature, however, is not confined to anthologizing and editing and reviewing the work of others. Geddes himself is a poet. In 1971 he published *Poems*. In 1972 he published *Rivers Inlet. Snakeroot*, a collection of poems about the prairies, and *Letter of the Master of Horse*, a narrative poem that won the E.J. Pratt Medal and Prize for poetry and has been described as "one of the best single poems ever written in Canada," were both published in 1973. Geddes's most recent book of poetry is entitled *War and Other Measures*; it explores the events leading to the death of Paul Joseph Chartier, the man who blew himself up in the washroom of the House of Commons on May 18, 1966.

*War and Other Measures* has received widespread praise from Canadian critics. Robert Kroetsch, author of *The Studhorse Man* and *Badlands* among other novels, has called the book "the kind of poem that poets are only supposed to be able to dream." George Woodcock, well-known writer and critic, calls the book "an immensely difficult task" and says that Geddes has tried to "write a moral poem in which the moralism does not destroy the poetry. By his method of building it up in self-contained vignettes, each of which is a mental episode and a step towards catastrophe, and by avoiding all didactic intervention beyond his introductory remarks, he has succeeded well. *War and Other Measures* is a good poem whose Canadian roots do not impede a wider contemporary relevance." Eli Mandel, Toronto poet and critic, calls Geddes's book a "mature, controlled and coherent book . . . on the subject of politics and imagination." Mandel says the Geddes has been able to "take a curious and bizarre incident . . . and fashion out of it a fable for our times."

Praise like that would make it easy for a young poet to lose perspective on his work. Geddes, however, has been able to maintain a sense of self-criticism, tempering his estimate of what he

has done with his idea of what he wants to do. He is quick to point out the limitations he sees in his earlier poetry, and he is somewhat self-effacing when he speaks of it. Talking about his poetic influences, he says, "I don't think there's any one poet that I owe more to than any other. I've probably stolen the best from as many as I can and the worst from more than I want to admit." Geddes also acknowledges that, at the present time, he is a minor poet; that sort of judgment is refreshing in a time when so many Canadian poets, being indiscriminately hailed as major talents, believe that they are major talents.

It is obvious, though, that Geddes has ambitions beyond being a minor poet. In *War and Other Measures*, he has tackled a huge and complex subject, and the risk of failure in such an attempt is very great indeed. It is not easy to write a unified and successful book of poetry at any time, and the subject of *War and Other Measures* makes it even more difficult. The book takes the event of Chartier's death and seeks to explore the event and its background and its significance. Geddes sees the book as the most difficult and most important thing he has tried; he calls it "the most vivid and intense book I've written."

The Chartier of *War and Other Measures* is a fictional creation. The book takes Chartier's death and its circumstances and "recreates it entirely, just using the barest historical trappings." "I've taken a historical event and exploded it," Geddes explains. The book is based, he says, on "my conception of contemporary political psychology: the search for some kind of viable political action." A series of poems form the narrative and act as pages in a fictional diary of the tormented psychological life of Chartier; the poems aim to give some insight into the man and the meaning of his attempt to blow up the House of Commons. Geddes says that "each page is a stopped-frame in the diary of this man's life."

The use of a cinematic, visual image like "stopped-frame" is very revealing. The major problem with the book resides in its overabundance of imagery and the disjointed way the images are organized. The stopped-frame organization gives *War and Other Measures* an overall sense of fragmentation. On one level this seems reasonable—after all, Chartier is mad—but on another level it tends to produce weaknesses in the book. By using self-contained and disjointed verse units to convey Chartier's sense of disorientation and madness, Geddes courts disorder in his poetry. By concentrating heavily on visual imagery to reveal how Chartier perceives the world, Geddes often prevents himself from making more complex and telling poetic statements of other kinds. Both these things reduce the power of the book and prevent the most successful control of the poetic energy that is there.

Geddes is most successful when he avoids trying to move the reader with a great deal of imagery. The poems in *War and Other Measures* strive to be intensely visual; this becomes a problem when so many of the images seem strained. Geddes tries to create an atmosphere of violence and disorder with many of his images. Often he tries too hard: "Battalions of Dutch tulips/occupy the streets, the canal" or "Spring roots stretch and swell/thrusting green bayonets/into the pregnant air." Those images lack genuine feeling. Another image that is much more successful at creating a sinister and violent mood is "darkness bleeds into corners/of the evening."

Other images do not seem to perform any real expressive work; for example, "a million sleeping bushels" describes grain on ships sent overseas. Other images are annoyingly vague and flat: "At dockside in Montreal/the immigrants stared at me,/wrapped in old nationalities." Nonetheless there are other images that are successful and disturbing. "Out of this blood another rose/will burst, its fragrance/confound the universe."

Often, the most frightening and powerful parts of *War and Other Measures* are not the parts where Chartier is violent and disoriented but rather where he shows a certain lucidity in madness. I am more disturbed by a line like "Now begins the breakup/the unnaming" than I am by a description of tulips as troops. There is more sinister violence in the following poem than there is in any number of overtly violent images:

> One last smoke. It soothes,
> gives a shape, an attitude.
>
> Discard the laws of cause
> and effect, abolish reason.
>
> There is nothing to be found
> beyond the descriptive act.

The fault of overwrought and overabundant images is one that occurs in Geddes's *Snakeroot* also. That book, too, is uneven. There are some good, evocative passages like the line from the poem "Where Both Rails Meet": Vibrations shake the schoolhouse/ whispering, still whispering,/Winnipeg, Montreal, Vancouver." But once again there are too many images that distract, too many images that seem to be there for their own sake; too many do not move the reader as they are intended ("Crows ragged against the sky,/black as the Brylcreemed hair/of my father"), too many do not rise above cliché ("Here you are never far/from winter, it hangs/like an icicle in the mind").

Geddes says that the book was an experiemnt "exploring how you work with a particular type of content; that is, all the poems are about the Prairies," and he is quick to point out, "Some of the poems are pretty flimsy." Geddes says that the main problem was "to restrain the language, to keep it from getting sentimental." He recognizes that the poems often need a controlling and restraining principle.

Curiously enough, in a poem written before *Snakeroot*, Geddes has been successful in finding a way to control and restrain the language and has found a subject that lends itself to his poetic style. The *Letter of the Master of Horse*, which won the E.J. Pratt Prize for Poetry, had its beginning in "an old geography textbook." There was a "little illustration of a fully rigged ship with horses swimming around it and a two-line description of the Horse Latitudes," Geddes explains. From that illustration, Geddes conceived, and began to develop, the idea of the jettisoning of the horses, the reasons for it, and its emotional impact.

The subject, however, lends itself to melodrama. Geddes found that early attempts to write the poem failed to render the experience truthfully. "The way of controlling the materials, getting something of a restraining or understating quality," he found, "would be to have a point of view that was right in the middle of the event and so overwhelmed that it could only speak of it in a fragmented fashion." Possibly because the subject here is smaller than that of *War and Other Measures*, the fragmentation is not excessive or harmful.

The *Letter of the Master of Horse* is cast in the form of a letter that is thought or spoken or written by a young man in charge of a shipment of very fine horses on their way to the New World. The young man is profoundly disturbed by the decision, made by those in command on the ship, to jettison the horses because they are bad luck. As Geddes points out, the poem shows the influence of Ezra Pound's Chinese translations such as "The River-Merchant's Wife:

A Letter" and what Geddes calls "poems of voice" like Eliot's "Prufrock." "Poems like that I've been greatly impressed by," Geddes says, "and I've been concerned to develop a sense of voice in my poetry. Not necessarily my own voice but a voice that's credible."

Although Geddes hates to use words like "victim" and "system" because they have had too much careless use lately, he does see the young Master of Horse as a person victimized by the system. The young man is powerless to stop the jettisoning of the horses. The images of the horses floundering and dying in the ocean, then, are powerful and effective in their appropriately bitter and vivid intensity.

> They drink long
> draughts, muzzles submerged
> to the eyes, set out like spokes
> in all directions.
> The salt does its work.
> The first scream, proud head
> thrown back, nostrils flared,
> flesh tight over teeth
> and gums . . . .
> The spasms, heaving bodies,
> turning, turning.
> I am the centre
> of this churning circumference . . . .

This frenzied, brutal description provides an effective context to lend power to the weary understatement of "Only/the silent industry of sharks/could give them rest." In this poem, violent images and calm statement work to good effect. Geddes has found a subject that adapts itself well to his particular poetic style, and he has found a way to maintain a wholeness and consistency in imagery and feeling. This poem is his most successful work. *War and Other Measures* often shows more flashes of verbal skill and more complexity, but *Letter of the Master of Horse* is more satisfying as a complete work.

In both *Letter of the Master of Horse* and *War and Other Measures*, Geddes has chosen to talk about systems and the way people are affected by them. The Master of Horse is a young man who can do nothing but allow the horses to be thrown overboard; he is powerless in the face of those in authority on the ship. Chartier, however, takes his essential powerlessness and turns it into a rage and hopes to change things by blowing them apart. Both characters are faced with something that calls for some sort of action and yet neither of them really find solutions to the problem.

Finding solutions and forms of action that will actually change things is something that concerns Geddes himself. He knows that there are many things that need changing in his own field: the standards of Canadian literature must be improved, more people must be made aware of their own literature, departments of education and universities must take more responsibility in bringing Canadian literature to students. All these things are part of what needs to be done. And Geddes sees his own problem, insofar as he is committed to Canadian literature, as finding workable ways to correct these problems.

Of course, it does seem reasonable that a Canadian writer would be more than a little interested in seeing something that he is producing find a wider audience. Geddes's concern for Canadian literature, however, stems from a deeper commitment to the cultural political, and social importance of a strong national literature and the creation of a climate where the "few really good writers working now can be recognized and the minor ones can be encouraged—but not too much." Geddes knows that there can be problems with uncritical admiration for works simply because they are Canadian. He knows too, however, that there are dangers and difficulties in other extreme.

Geddes has, for a number of years, reviewed Canadian poetry for the Toronto *Globe and Mail* as well as a number of other magazines and periodicals. Geddes admits that in Canada "journalistic criticism is in a terrible state," but he quickly adds that "periodical criticism is improving and there is some good criticism being written in the journals."

There are a number of problems with the state of literary criticism in Canada. Frequently, journalistic reviewers are afraid to be too critical of works; often this is because the reviewers are poets and writers themselves who do not wish retaliation on their own books and who have a tendency to be too lenient because they know the difficulties involved in writing well. Geddes, however, seems to be unlike this in his reviewing: he says that "as a poet, when I read, I am very critical—I don't pull any punches." "I'm interested in improving the standards." This means, Geddes says, "I try to focus on the good things *and* the limitations and try to balance these out." His efforts at fairness are not always appreciated. There are a few Canadian poets who find it hard to be cordial to Geddes now, but Geddes takes that in stride. He can laugh at what he hopes is at least a half-joke when he recalls that after he had reviewed a book by Al Purdy, Purdy had asked him, "Why do you hate me Geddes?"

When asked if he thinks that criticism in Canada might improve if it were done by those not actively engaged in writing Canadian literature, Geddes admits that it might help. But he is also quick to point out that there could be problems with this. "Objective literary reviewing can be good," he explains, "but it can also be bad because sometimes the so-called 'objective academic reviewing' such as you can get in the *Times Literary Supplement* can be deadly. Often the reviewer has no humanity or catholicity or breadth of taste." Poets and writers, at least, feels Geddes, will have a certain kind of sympathy for the work under scrutiny.

Too many academics do not yet take criticism of Canadian literature seriously enough, Geddes feels. As he says, "not many Canadian scholars or critics studied Canadian literature formally; all their major critical work was done on Shakespeare, Wordsworth, and so on. Their study of Canadian literature was more like a hobby." And there may be a holdover of this formerly prevailing attitude in many academics who still do not consider Canadian literature important enough to do critical and scholarly work on. Leaving all the critical work to the poets and writers, however, would be a mistake, for too many of them have too much sympathy and too many have a breadth of taste that bespeaks a lack of depth. Geddes thinks that there must be both kinds of criticism if the standards of the literature are to improve, and in his own reviewing Geddes tries to achieve a sense of balance between the poet and the academic.

He tries, above all, to be fair. There is, for example, a critical and explanatory note on the poetry of Margaret Atwood in the back of Geddes's *Fifteen Canadian Poets* anthology. In describing Atwood's prosody, Geddes says that "often her line-lengths seem haphazard, questionable, convincing as units neither of sound nor sense; but even here it might be argued that the line-ends serve as unexpected spring-boards or pulled rugs that draw attention away from music and toward meaning." Geddes explains his attitude to Atwood's prosodical shortcomings by reasoning that "if there is so much going

on in terms of the eye and the mind, as there is in Atwood, one is prepared to forgo a certain amount of the pleasures of the ear." This is the balancing of the "good things *and* the limitations."

But no matter how fair the critics are, no matter how skilled they become, a literature will not flourish solely by the attention of the critics. Something that disturbs Geddes even more than the weak condition of criticism in this country is the apparent disregard for the literature shown by the public and, even more disconcerting, by the education system.

"We leave it so late that the kids are reading Dostoyevsky and Faulkner before they even hear of Leonard Cohen," says Geddes. "And it creates, in some sense, a ludicrous comparison because Cohen is not of that calibre as far as I can see, but he is," Geddes quickly adds, "important in quite a number of ways." Here Geddes touches on two important points that he comes back to often. One is his mention of Faulkner and Dostoyevsky and the other is his concern for giving Canadian literature a fair chance. Some people might feel that reading Leonard Cohen is not important at all, that as long as students read writers like Faulkner and Dostoyevsky everything is fine. Geddes, however, feels that there is an important lesson for Canadians to be found in the writers like Faulkner and Dostoyevsky, and it is a lesson that validates the study of Leonard Cohen and other Canadian and regionalist writers.

Faulkner and Dostoyevsky, says Geddes, "are two of the greatest regionalists you'll read." "They are great because they send down a tap root into one area so far that it comes out the other side." Geddes goes on to say that "as an academic, I've always thought that literature ought to be about fundamental human conditions, wherever it's set, and if it's about fundamental passions and life conditions, then it ought to be read if it's good." But he can also make an argument for regionalist writing even if it isn't of the Faulkner calibre.

He of course does not believe that a work should be admired and read "because it was written about Regina or something," but he does think that "sometimes the very immediacy of a book and the familiarity of the setting and the context creates an immediacy that is itself useful educationally and psychologically."

But often, according to Geddes, this advantage of regional literature is not exploited in the school systems. With Canadian literature, "teachers," says Geddes, "don't know what to teach when." Teachers often don't understand what sort of things are going to interest their students; they often don't know what Canadian literature will interest the students. "You might have someone teaching *Who Has Seen the Wind* to some kids in the middle of the mountains. The teacher is thirty-five to fifty and it gives him the willies to be reading this book and be reminded that he was once a child—or still is but doesn't look like one—and he thinks the kids are really going to be turned on. But they're bored spitless because the book is about the prairies, which they've never seen, and they're *still* kids, and they can't relate to it." In compiling his anthologies and in his teaching, Geddes learned a lot about what interests people and how they can be "turned on" to Canadian literature.

One thing he found with the anthologies was that he was "constantly working with compromises," compromises between the audience and his own aesthetic standards. He found that he had to get both the best work into an anthology as well as the kind of literature that would appeal to a wide readership. What he found was that "certain contents mean a lot more to people than certain others." Once again, this is a matter of knowing the audience and knowing what things they are going to be receptive to.

The next question, of course, is, "Is there an audience for Canadian literature?" Apparently so, at least in Geddes's recent experience. Last year he spent a good deal of his time travelling throughout Canada giving poetry readings and conducting workshops and seminars on Canadian literature. He then concentrated on schools in the interior of British Columbia and met with teachers and students to discuss the teaching of that literature. Geddes found this experience both disheartening and encouraging.

He found that there was "interest but frustration" among both teachers and students; he found, he says, "interest but no channels, no leadership." Local and provincial departments of education did not provide teachers with any guidelines for the teaching of Canadian literature and, in fact, gave no encouragement at all. Teachers asked for guidelines but the requests were ignored. Geddes found that his own suggestions for teaching regional and Canadian literature in British Columbia schools met with no response from the provincial department of education. *Skookum Wawa* was one way Geddes tried to help overcome the lack of concern and remedy the lack of teaching material.

He also advised teachers to do what he had done when faced with government and public apathy: "When faced with this kind of impasse, start doing it on your own." Soon, he assured the teachers, when enough people are teaching the literature and there is enough interest and enthusiasm shown by teachers and students and enough parents come out in support of the idea, "the departments of education will find out and start recommending it." That is one way of solving the problem of finding "viable means of political action," of getting what needs to be done done.

This sounds fine, but one wonders if Canadians should be forced to read their own literature. Should an audience be legislated for Canadian literature by departments of education on a widespread basis? For Geddes, the question of legislating does not enter into it. "You have to accept that certain things are going to be laid down," he says. The important question is, what things? Geddes maintains that "we've been legislating an audience for second-rate British and American authors for years." He reasons that "given the political realities, it seems sensible to legislate in favor of your own country as well, rather than always legislating in favor of other people. That's just the colonial mentality that we're struggling against." This does not mean, however, that Geddes has forgotten about the "sense of balance" that he thinks is necessary; more support for Canadian literature will simply help to redress certian inequities.

"I'm not concerned with a big tidal wave where everything is washed out and all you've got left on the beach is a few dead, frail fish—Canadian fish," he adds ironically. "That would be slim pickings. I think we have to be teaching a bit of regional, a bit of Canadian, a bit of American, a bit of British, a bit of Russian, and so on. It has to all be included."

*While he is here as writer-in-residence, Gary Geddes is writing poems, researching a book on the Fall of Hong Kong, and writing some short prose fiction for the first time. He will give poetry readings from his own work, and he will speak to University classes on areas of Canadian literature that he is knowledgeable about. As well, he will meet with young student writers here to discuss their work. Geddes hopes to be able to meet with local teachers and students who are interested in Canadian literature. It is obvious that Geddes will be making good use of what he calls "this tremendous patronage" given him by the University.*

# The green revolution

## Modernization of agriculture in developing countries

*By C.F. Bentley*

**A boon, not a bust**

The "Green Revolution" has been the subject of much reporting and discussion for about a decade. Recently a spate of misleading reports have attempted to discredit the benefits of the Green Revolution. Such misinformation does real harm. For example, in April 1976 I was very unhappy to learn that an Edmonton junior high school class, after six months of "study," had reached the conclusion that "the Green Revolution is a dead issue." Fortunately, I was able to show those students and their teacher that their conclusion was completely incorrect.

Names have a habit of sticking, even if they aren't good ones. The term "Green Revolution" was coined by news reporters when they first learned of the dramatic increases in food production which resulted from modernization, particularly of wheat and rice production in some parts of the world where yields of those crops had been practically static under traditional subsistence types of agriculture.

The Green Revolution is not one crop variety, nor one new practice, but a package of new grain types, production inputs, and modern practices which in appropriate combination give remarkable yield increases of wheat and rice in parts of Asia, Africa, and Latin America. These are the principal components of the system.

*The high-yielding varieties (HYVs).* Agricultural scientists have developed new strains of wheat and rice which give remarkably good yields under favorable conditions. Two special characteristics of these new varieties of grain explain their high-yielding ability:

*Semi-dwarf, stiff-strawed.* The new plants are considerably shorter than most local varieties previously grown. The straw of the new plants is unusually stiff and strong so that there is practically no lodging (falling and remaining down) of the grain even under the most adverse conditions of wind and rain. Lodged plants are not only much harder to harvest than erect ones, but after the lodging the filling and maturing of the seeds—the development of the grain part—is slowed substantially. Pests frequently damage lodged crops more severely than standing ones. Lodging, therefore, seriously reduces yield.

*Fertilizer responsive.* Most traditional varieties of wheat and rice grown in developing countries respond with increased growth and yield if fertilizer applications are relatively light. But if such grains

are generously fertilized they frequently lodge so badly that yield is lower than it is with lighter applications of fertilizer. The HYVs are responsive to fertilizers, too, *but as they are not prone to lodging, yields continue to increase even at high rates of fertilization.* It is usually highly profitable to fertilize the new HYVs of wheat and rice.

*Reliable water supply (irrigation).* A great deal of the wheat and rice land in Mexico, India, the Philippines, and other developing countries has been irrigated for a long time. But yields were usually low and the extra cost and effort needed to ensure reliable irrigation gave such modest returns that many farmers didn't improve the amount or quality of their irrigation. But irrigated fertilized HYVs gave such good yields that farmers found it profitable to improve the irrigation of their fields. Many bought pumps and motors so they could irrigate their fields quickly from available groundwater supplies—something that was not very worthwhile with the traditional grain varieties.

*Improved pest control.* Insects, weeds, diseases, and rodents such as rats reduce yields or damage or consume parts of crops everywhere in the world. Yields of grain crops as well as fruits, vegetables, and fibre are almost universally reduced by pests—unless they are controlled. The work or cost of controlling pests may be nearly as great for a low-yielding crop as for a high-yielding one. Thus when the HYVs became available it usually became highly profitable for farmers to use herbicides to control weeds, or insecticides to control insects, or fungicides to control diseases when the same practices were often not profitable if traditional varieties were grown on the same forms.

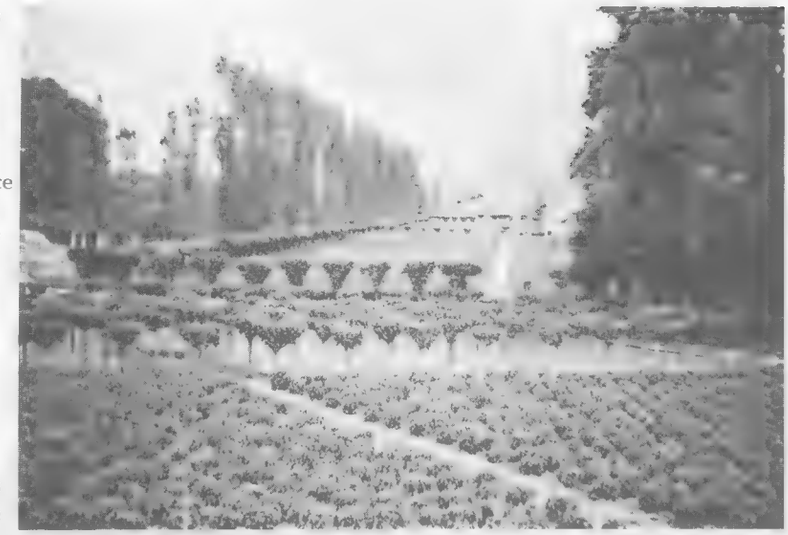
*Farmer responses.* Many people incorrectly consider peasant farmers to be dull people who won't change their ways. The HYVs have proven that when there is something of clear advantage which is within his capability to use, the small Mexican or Indian or Philippino farmer is quick to adopt it.

For example, the new high-yielding wheats spread more quickly in India than any improved agricultural practice has ever spread in Canada on a comparably massive scale. Within four years after they were first generally available, the new wheats occupied over 90 percent of the areas to which they were suited in India. In the Tanjore district of India, there were only 200 acres in a new improved rice in 1964—and 600,000 acres in 1967!

**Problems: past, current, future**

Many of the reports declaiming the Green Revolution have had some justification while others are based on lack of knowledge or on prejudices. Let us consider some of the complaints.

*Fertilizer is required.* It has been contended that the HYVs must be fertilized to "do their thing." The fact is, every living cell (whether in plant, animal, you, or me) must have several essential elements of which N (nitrogen) and P (phosphorus) are the most important examples. Some soils are inherently low in their ability to supply plants with N and/or P. Fields that have been producing crops for many years and that have not been properly fertilized have had large amounts of N and P removed in the crops that have been taken off to feed people or animals. Currently the P content of grains shipped out of the Prairie Provinces of Canada exceeds the total P content of all commercial fertilizer used here—so past and current farming practices here in Western Canada are steadily reducing the P content of our soils as we ship grains to the Orient, Europe, or Eastern Canada. Our beef and pork and other



**Left,** *a vivid example of the difference between the product of a crop of traditional unfertilized wheat and a crop of fertilized high yielding wheat grown on neighboring farms in Kashmir.*
**Top,** *a research station in Kashmir tests improved plants for sericulture (silk worm rearing).*
**Below,** *without pest control at this Indian location, emerging sorghum is immediately attacked by insects; there are nine other insects that attack the crop in successive stages of its growth.*

agricultural exports also carry away with them important amounts of elements essential to life of any kind. We are depleting our soils! In some countries that has been going on for hundreds or thousands of years.

When crops are planted on land with a low ability to provide N or P (or any other needed element), the amount of crop growth *and of yield* will be limited by the lack of "available nutrients." Such deficiencies can be overcome by appropriate use of the proper fertilizer—and higher yields are the usual result.

HYVs and local varieties of grains both give low yields on soils low in the ability to provide essential elements to crops. Traditional varieties and HYVs both respond to proper fertilization—but for a given amount of fertilizer the yield increase is usually greater with HYVs than with traditional varieties. At Pantnagar Agricultural University in India, nitrogen fertilizer at 120 pounds per acre returned 30 pounds of new type wheat for each pound of N while the local wheat variety gave only 10 pounds of wheat per pound of N applied.

Some excitable ecologists and other ill-informed people have railed against the use of "artificial" fertilizers, contending that they adversely affect the environment, or the soil, or the healthfulness of foods—or all of those things and more! For those able to read and willing to think, there is massive indisputable proof, on a world basis, that use of fertilizers in accordance with official recommendations has almost never had adverse effects in any of these ways—and more importantly, in addition to markedly increasing yields in most cases, recommended use of fertilizers frequently causes valuable improvements in the nutritive quality of crops. Feeding experiments with Alberta barley grown in the same fields have found animal gains to be as much as 60 percent greater when fed fertilized barley compared to gains from the same quantity of unfertilized barley.

*Crop pests—constant hazards.* In a very few cases, in particular locations, new HYVs have been more susceptible to pest attack by insects or diseases than the previous local varieties were. That was sometimes the result of agricultural scientists being denied the opportunity to test new strains as thoroughly as they wished: politicians are always anxious to demonstrate how their support has resulted in great benefits to the people and may override the desires of scientists to test new materials extensively before their release. In other cases, explosive increase in plant disease or of an insect pest was favored by the fact there was such a great increase in the amount of the new crop grown in an area, a condition which has historically been favorable for pests to multiply.

But pests have always, and will always, be a threat to crops. Farming is an unnatural activity which greatly changes natural conditions. Currently over twenty million acres of wheat are grown in the Prairie Provinces of Canada each year—where none was grown 175 years ago. That vast area of wheat has enabled many millions of people to have food. And that huge expanse of wheat has produced glorious opportunities for cutworms, saw-flies, rust, wild oats, and other pests to increase explosively too. Literally, those pests never had it so good before!

Fortunately we have found solutions to some of our agriculturally created or magnified pest problems here in Western Canada. Some insects have been controlled by how or when we cultivate the land. Plant breeders have developed a type of wheat in which the saw-flies can't reproduce. And rust, a fungus disease of wheat, greatly increased above its initial natural level by our grain farming, is kept in hand by continuous development of new varieties of wheat which are rust-resistant. But natural mutations of the rust organism are continuously producing new types of rust which are able to attack the previously rust-resistant wheats, so about every seven to fourteen years a new variety of wheat is needed for Manitoba and a considerable part of Saskatchewan. If we were to cease the continuing program of constantly developing new rust-resistant wheats for Manitoba, it would soon be impractical to grow wheat there: rust would lower yields so much no one would try to produce that crop.

In the developing countries where the HYVs are being grown, new varieties being developed are being tested under great intensity of pest pressures. Only strains which are immune or are clearly superior in resisting pest attack are carried forward in the plant breeding programs. As a result, many of the new HYVs now being released have pest-resistances or tolerances considerably better than the traditional local varieties.

Environmentalists have justifiably attacked some previously used and recommended pesticides. However, there have also been many documented cases where the adverse effects of pesticide use were the result of misuse or abuse rather than from recommended usage. In such cases those misusing the pesticides should be attacked—not the pesticide which was incorrectly used.

Intelligent people must be concerned about the environment, and every reasonable precaution should be taken to protect it from short-term or long-term injurious contamination—whether from agricultural pesticides, automobile exhausts, or smelter emissions. But contemporary concern for human lives must be reasonably considered, too. During the past decade the additional food produced throughout the world as a result of judicious recommended use of pesticides has protected tens of millions of people from death by malnutrition or famine. The combination of pest control and HYVs enables considerably greater food production than is possible with traditional varieties—with or without pest control!

*Adverse effects of change of diet.* In the Punjab area of India, where the new wheats have been spectacularly successful and profitable, the area planted to that crop increased very rapidly—at the expense of Bengal Gram and some other highly nutritious grain legume crops of high protein content for which high-yield technology is not yet known. It was claimed that the resulting change in diet would adversely affect health because people would have less of the protein-rich food grain to eat. However, a recent study by J.G. Ryan of ICRISAT has found that claim to be incorrect. The HYV wheats produce so much more grain that the average food intake of the people in the area is much higher than it was before. Moreover, the actual quantity of both protein and lysine in diets there were found to be 17 percent higher in the Punjab today than they were previously, when poor yields meant less food per person.

*Only the rich will benefit.* One of the most persistent and unreasonable complaints about the Green Revolution has been the claim that it benefits only the larger, wealthier farmers. Again, a grain of fact has been distorted out of any reasonable proportion.

As explained earlier, the HYVs do best when they are adequately fertilized and reliably watered, and there is effective pest control. Fertilizers, pest control materials, irrigation pumps, and tube wells all cost money. Obviously, a well-to-do farmer will find it easier to

pay cash for such things than will a poor farmer. The richer farmer can more easily apply the recommended rate of fertilizer than the poorer one—and so the rich farmer will usually increase his yield more by fertilizer use than the poor farmer. Moreover, if there is a shortage of the improved seeds, or of fertilizer or of irrigation pumps, the wealthier farmer can outbid the poor farmer for the limited supply available.

In spite of the inherent disadvantages of their economic position, small cultivators can and do benefit if they employ the improved technology of the Green Revolution.

**Spin-offs from modernization**

There has been considerable critical writing about problems resulting from the Green Revolution. Fortunately, the benefits are a great deal more important. For clarity, let us look at some favorable and some unfavorable effects.

*Unemployment?* One complaint against the new varieties has been that farmers grown wealthy from the Green Revolution bought machines to seed or harvest crops, displacing workers who previously did the work by hand. Again, there is *some* truth to the idea—but not much!

Machines create jobs as well as doing the work of some laborers. To manufacture machines creates employment in mines and smelters and factories. To keep machines in working order makes new jobs for mechanics and service personnel. And a machine can harvest a crop or till a field in one day, chores which often take laborers two weeks to do: so in some parts of Thailand it is now regular practice to grow two crops of rice per year on land which previously produced only one crop. Such changes certainly create more jobs than they eliminate, and most of the new jobs entail less arduous work than those that have been eliminated.

*Food of poorer quality?* Some of the new wheats did not have the preferred color of grain (and so brought a lower price on the market) while one of the new rices had "a white belly" and the flavor was different from that which many people had grown to like. Two points offset those valid comments.

—A hungry child is more concerned about something to eat than about the color of the food or about a "white belly" on a rice grain.

—Plant breeders are very highly skilled scientists: it took only a very few years to develop new wheats with the preferred color; and the "white bellied rice" was soon succeeded by new, high-yielding types having the preferred flavor and other characteristics.

The inherent nutritive value of the new wheats and rices is at least as good as that of the varieties they have replaced.

*More mono-cropping: a bad thing?* Yields of the HYVs are so much higher than previous varieties that it has often become more profitable to grow wheat after wheat where previously other crops such as vegetables or legume grains normally followed wheat. It has been argued that such a change is undesirable as it is unnatural to have one crop time after time on the same land. Mono-cropping is reputed to be "hard on the land" and to favor pests.

Since farming is inherently unnatural, mono-cropping is little more unnatural than other types of cropping. Modern farming

**Top,** *since most land holdings are extremely small in tropical countries, improved crop varieties and agricultural practices are essential for increasing yields.*
**Below,** *compared to the new stiff-strawed semi-dwarf high yielding variety of rice pictured on right, the lodged traditional variety of rice yields very poorly.*

includes soil-testing which enables a balanced program of soil management and fertilization which over a period of time will improve the land. Pest control is a problem with almost every crop, but with HYVs it is usually profitable to control pests, whereas in traditional farming pest control is seldom worthwhile.

With appropriate management mono-cropping is very successful on much of the world's farm land. Rice has been grown for thousands of years on the same fields in Egypt and China and India. The same is true for wheat in other places and for sugar cane in still other countries.

*The multiplier effect.* Although less than 6 percent of Canada's labor force is engaged in primary agricultural production, about 40 percent of Canada's economic activity is directly or indirectly dependent on agriculture. In Edmonton there is sharp awareness of the oil, gas, and related petrochemical industries as well as those based on them, but the packing plant industry is that city's largest industrial employer! Thus, because primary agricultural production entails use of such things as fertilizers, pesticides, and feed supplements, as well as farm machinery, vehicles, and power, in addition to transportation, processing, storage, retailing, and so forth, each dollar's worth of farm produce generates about seven dollar's worth of economic activity. Thus, economists say that the multiplier effect in agriculture is about seven. The multiplier effect for petroleum is about three.

The small subsistence farming of developing countries produces very little surplus to be sold: most of the production is consumed by the farmer's own family. Therefore, that kind of agriculture has very little if any multiplier effect in the general economy. Moreover, in most developing countries fifty or more percent of the labor force is engaged only in primary agricultural production. So half or more of the population sells very little of anything, has almost no cash income—and therefore can buy very little of what others produce.

The Green Revolution is a major force helping to change this depressing situation. Those who adopt the new methods produce more to sell. They also have more to spend for purchase of machines, fertilizers, clothes, irrigation, better homes, and so forth. Such purchases put the multiplier effect to work and create specialized employment for others who are not directly engaged in primary agricultural production.

Of more fundamental importance is the fact that farmers adopting the new agricultural methods increase their own total production. The other industries selling things to farmers have a much larger market and their production or services become more efficient. So everyone concerned has a good prospect of an improved level of living because each produces more and more efficiently than previously. Such improvements are likely to be enduring—and often tend to increase. The most disadvantaged people (the little farmers) have an opportunity to improve their lot by their own increased productivity. With modernization of agriculture there should be less need for socialized schemes of "transfer payments" which do not encourage self-help efforts or increased productivity.

*May affect urban migration.* Population growth in cities around the world is now very much more rapid than in rural areas. Poor subsistence traditional farms offer little future for the children there. Local towns seldom have jobs for such rural youth and so increasingly the younger people and families go to cities where usually they live under rather appalling conditions. The Green Revolution in some cases tends to reduce or stop the urban drift. As farmers produce more, they need many inputs, and they have things to sell so there are more jobs in the local towns—fixing machines or selling them; supplying fertilizers or buying surplus grains; making clothes or furniture or what-not for the better homes farmers want. Professional people like dentists and teachers and nurses are then more likely to be willing to reside in towns rather than cities. I do not argue that all of these things will necessarily or easily happen, but there are places where such things are occurring. Such changes, when they do happen, constitute significant improvements in the quality of non-urban living.

**Concluding comment**

There aren't easy, simple solutions to such complex problems as increasing food production in over-populated areas with poor lands and poverty-stricken farmers. It is also very difficult to reduce infant death rates and other health problems in such disadvantaged rural areas.

To say that the Green Revolution has failed because it hasn't solved world food problems, or because it hasn't enabled small farmers to attain levels of living comparable to those of more affluent farmers, is preposterous. It would be equally reasonable to say that modern health sciences have failed: people still die and childhood death rates continue to be higher among poor people than among wealthy people.

The world is finite and there are limits to this earth's life-sustaining capabilities—in spite of whatever marvelous new agricultural technologies may be developed in the years ahead. Mankind must control human numbers or suffer unprecedented amounts of degradation from famine and malnutrition. But until we find the ways, will, and wisdom to control the human population, the modernization and improvement of agricultural production, the "Green Revolution" is the most realistic way to minimize human hardship caused by lack of sufficient and proper food for the world's peoples.

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# What kind of *Trail?*

## Your response and our response

We've probably received all the returns we are going to receive on the questionnaire we published two issues ago in *New Trail.*

We received about 300 responses to the questionnaire, and, in sum, the results were very supportive indeed. It would seem that we are on the right trail (sorry!) with a balance of feature stories about both the present and the past, alumni notes, and campus news.

There were surprising numbers of respondents who wanted more of everything, surprisingly few (two, actually) who wanted less of everything, and a majority who thought the content was just right. A substantial number wanted more feature articles about the University today (140) and the University past (146). The majority of respondents wanted the same (116) or fewer (101) features about topics of broader current interest, feeling that they could find this material elsewhere; but the 61 who wanted more of this kind of story elaborated strongly on their feelings about the University's need to involve itself in the affairs of the rest of the community. There was considerable support for feature articles about people at the University, staff, students, and individual alumni, and we intend to produce a few more articles about people in the issues to come. Campus Reporter, Alumni Notes, and news about the Alumni Association were equally popular, and were considered to be in about the right proportion. Most respondents felt that the balance of photographs and text was about right, too (208; 48 wanted more photographs, 11 wanted more text).

One hundred and fifty-eight readers would like to see letters to the editor, and we may develop a policy to include these. Ninety-two favored book reviews, especially of publications of University staff and graduates. Sports news was favored by 69 respondents and opposed by a vocal minority; perhaps a yearly sports summary would be a good idea. Almost as many respondents favored the inclusion of poetry (53) and a few (31) would like fiction in *Trail.*

Stories about research at the University were requested by a great many respondents, as were personal sketches of interesting people, especially fondly remembered professors. Several readers were interested in new programs in the faculties they attended; in fact, we will be trying out a column that will talk about new developments in various departments in the University. Respondents had all sorts of ideas for articles for *Trail,* many of which we will follow up, a few (like "How to solve the problem of inflation") we will leave to other, larger minds—but we're grateful for them all.

Most respondents (184) felt that publication three times a year at a size of twenty-four pages was satisfactory (many felt it a satisfactory minimum), 39 thought it should be larger and less frequent, and 24 preferred it smaller and more frequent. Seventeen wrote encouragingly that it should be larger and more frequent, and our two friends, who earlier wanted less of everything, wanted it to be smaller and less frequent (one of them accused us of "defoliating the universe").

Feelings were mixed in the funding responses. One hundred and ninety-five felt we should try subscriptions, 161 thought that display advertisements should be used (many were reluctant about this and felt the ads should meet certain standards of design and good taste—we agree), and 128 were in favor of *Trail* seeking voluntary contributions. Frankly, we don't know what action we will be taking in funding, apart from leaving the door open to certain types of display advertising on a trial basis.

All in all, we were very happy with the response. We had no intention of setting a questionnaire to collect pats on the back, but in the majority of cases that is what we got. There is no better incentive to produce the best *Trail* we can than to know that a substantial number of people read and enjoy our endeavors.

One respondent, obviously alienated when she was a student, asked whether *New Trail* was produced by a machine; the University seemed so large and impersonal to her that she couldn't imagine that it was staffed by living, breathing, feeling people. Yes, Virginia, there are people in the University, good ones, middling ones, and some you can take or leave, the same as anywhere else; and *New Trail* is written and designed by a handful of people, mostly fairly young people.

And the people who produce *New Trail* would like to thank the people who read it and who took the time to help and encourage us through our questionnaire.

# The Alma Mater Fund

## A habit of giving

The Alma Mater Fund was established in 1974 to replace the Development Fund and the alumni portion of the 3AU Fund. It encourages alumni to support innovative projects at the University that normally would not be financed through general operating and research funds, projects that give "an added dimension" to the University and community. Since giving is a personal decision, the fund has a pleasant sense of freedom about it; indeed, the fund welcomes contributions of any amount. All gifts, whether $5 or $500, are significant. The 1976 committee to allocate gifts comprises Lois Foote, Alma Mater Fund Chairperson; Bernard Adler, President of the Alumni Association; Lorne Leitch, Vice-President (Finance and Administration); Alex Markle, Alumni Association Secretary; and Lorne MacPherson of the Fund Development Office. Although giving aid to worthwhile projects is a rewarding responsibility for these people, it is depressingly difficult. There is not enough money to help all the worthwhile groups needing financial support. And hence the appeal to each alumnus.

The Alma Mater Fund stresses participation by the greatest number of donors. But, success depends upon a substantial number of leadership gifts as well; thus, the Founders Club. It recognizes and encourages support from alumni who find it financially possible to give substantial donations and who are interested in a higher degree of personal involvement with the University. The Founders Club comprises members who contribute from $100 to $499, senior members who contribute $500 to $999, and fellows who contribute $1,000 or more in any one year. Membership may include the spouse of a donor if a joint gift is made and payments may be made in instalments throughout the year. In addition, gifts may be designated for a particular faculty, department, or project on campus. Benefits to members of the Founders Club include the annual Founders Club reception hosted by the President of the University. Members are sent selected University publications so that they are better informed of developments on campus. Advance notice and special invitations to the Spoken Word Lectureships are sent to members and they receive complimentary season tickets to regular Studio Theatre productions and over sixty Golden Bear and Panda inter-university athletic events.

What does the Alma Mater Fund support? In 1974, the Clifford E. Lee Playwright-in-Residence Award was established in the Department of Drama. Its immediate national success encouraged Canada Council to fund the program with a major grant. In the past year, the Fund assisted in the construction costs of a portable band stand for the University's main gymnasium, a major step forward in upgrading entertainment for athletic events. Assistance was given with publication costs of the *Mental Retardation Bulletin*, a tri-annual publication that disseminates research findings about exceptional children. University Archives appealed to the Fund to provide a donation to save some 3,000 highly flammable negatives in the process of deterioration. Thanks to the Fund's response, four photograph collections, all of which had been donated by friends of this University, are being rephotographed on safety film.

But requests are endless. Students need travel allowances to help them maintain an invaluable educational dialogue with others in their field. Their appeals, and many others, cannot be denied. Lois Foote, the Fund's Chairperson, believes, with Socrates, that "one must reach high, and still strive higher to achieve the highest" for this University. The highest *will* be achieved, but the University, its students, and institutions, desperately need the support of every alumnus.

**Alma Mater Fund—history of giving**

| | *Number of donors* | *Percent increase* | *Dollars contributed* | *Percent increase* |
|---|---|---|---|---|
| 1973-74 | 1,021 | | 25,129 | |
| 1974-75 | 1,949 | 46.5 | 39,605 | 63.2 |
| 1975-76 | 3,156 | 38.2 | 64,463 | 61.4 |
| Total | 6,126 | | 129,197 | |

**Alma Mater Fund—**
1974 to present: $116,043

**Scholarships and bursaries:**
Graduate Students' Associa
Matriculation bursaries
Faculty of Nursing, scholars
Other

**Academic projects: $22,893**
Boreal Institute of Northern
Centre for the Study of Me
Department of Elementary
mathematics teaching kit
Faculty of Home Economics
Department of Art and Des
Department of English, Wri
Department of Community
Faculty of Law, invitational

**Literary projects: $32,480**
Centre for the Study of Me
MacEachern Memorial Lect
Spoken Word Lectures
*Those Tumultuous Years*, pu
Department of Philosophy,
Women in China Conferen
*A Bibliography of English-L*
*Canada 1800-1914*, public
*Figures in a Ground*, public
Faculty of Home Economics
*Canadian Journal of Sociolo*

**Music and Drama: $14,600**
University Mixed Choir

## Alma Mater Fund—Projects Funded

1974 to present: $116,043

**Scholarships and bursaries: $14,250**
Graduate Students' Association, conference fund
Matriculation bursaries
Faculty of Nursing, scholarship fund
Other

**Academic projects: $22,893**
Boreal Institute of Northern Studies, material on the North*
Centre for the Study of Mental Retardation, research equipment*
Department of Elementary Education, home teaching kits, mathematics teaching kits
Faculty of Home Economics, clothing for the handicapped project
Department of Art and Design, Notmonde project, conferences
Department of English, Writer-in-Residence
Department of Community Development, conference
Faculty of Law, invitational lectures

**Literary projects: $32,480**
Centre for the Study of Mental Retardation, *Bulletin*
MacEachern Memorial Lecture
Spoken Word Lectures
*Those Tumultuous Years,* publication
Department of Philosophy, conference
Women in China Conference
*A Bibliography of English-Language Theatre and Drama in Canada 1800-1914,* publication
*Figures in a Ground,* publication
Faculty of Home Economics, *Newsletter*
*Canadian Journal of Sociology*

**Music and Drama: $14,600**
University Mixed Choir
Clifford E. Lee Playwright Competition
NDWT Company tour
Theatre Network, staging and touring of plays by George Ryga
Alberta Barter Theatre
University Concert Choir

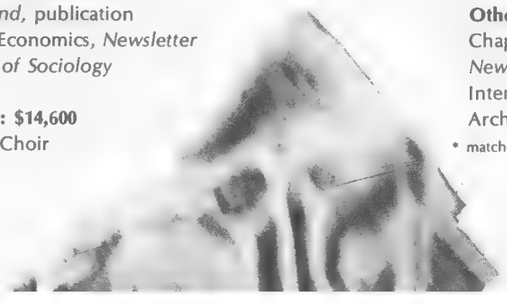
**Athletics: $7,198**
Department of Athletic Services, porta sign, porta stage, organ*
Cardiac testing device
International rugby

**Library: $6,636**
Books and material
Acquisition of W.P. Scott Diary

**Student Projects: $7,960**
Graduate Students' Association, building survey
University Parish, teach-in and conference
Speech therapy project
Newman Centre, conference
Women's Program Centre
Faculty of Business Administration and Commerce, Banff conference
Scottish Dance Club
International Students' Committee
Women's Year
Lister Hall, students' project
African Week

**Other: $10,026**
Chaplain Association
*New Trail*
International Students
Archives, preservation of photograph collection*

* matched dollar-for-dollar by the provincial government



# campus reporter

**Royal Society** Ernest Kanasewich, Professor of Physics, and Mary Spencer, Professor of Plant Science, have been elected to Fellowships in the Royal Society of Canada. Dr. Kanasewich was elected for his work in earth science and has gained an international reputation for work in geochronology, seismology, and time sequence analysis. Dr. Spencer was elected for excellence in the study of the metabolism of ethylene. Her present research centres on its relationship to biological energy conservation mechanisms and the way they change with development.

*Ernest Kanasewich*

*Mary Spencer*

*Jean Lauber*

**Jean Lauber** Dr. Lauber was appointed Associate Vice-President (Academic) on 1 July. She received her BA in Biology from Whitman College, Walla Walla, Washington, in 1948, an MA in Zoology from Washington University, St. Louis, Missouri, in 1951, and a PhD in Biology from the University of New Mexico, Albuquerque, in 1959. She is Associate Chairman of the Department of Zoology and much of her research is concentrated on the effect of light on living things, particularly birds and mammals.

**National Award in Music** National awards have been offered by the Board of Governors to Canadians who have made distinguished contributions over a period of years to the development of the arts in Canada. This year's recipient is Glenn Gould for his outstanding contribution in music. His professional debut was at the age of fourteen with the Toronto Symphony Orchestra and he has performed in concert throughout the United States as well as Germany, Israel, and the Soviet Union. Gould's own compositions include a string quartet, twelve-tone piano pieces, and "A Letter from Stalingrad," written for soprano, Lois Marshall. The award was presented on 9 July, and David Leighton, Director of the Banff Centre, accepted an engraved gold medal on Gould's behalf.

**Management Advisory Institute** An agreement between the Government of Canada and the Governors of the University will establish a non-profit Management Advisory Institute for a three-year term. The purpose of the Institute is to disseminate and share current knowledge with the wider management community, to develop the management consulting industry's capability to serve Alberta business, and to serve in a consulting capacity on specified assignments. The following persons were named Directors:
K.H.G. Broadfoot, Assistant Deputy Minister, Alberta Business Development and Tourism; C.G. Bullis, Regional Director, Federal Department of Industry, Trade and Commerce; C. Gordon Lindsay, SNC Tottrup Services Limited; Alan E. Gourley, Woods Gordon and Company; Gerald A. Mulhall, A.W. Fraser and Associates; John M. Tweddle, Willetts Macmahon and Company; John Delmar Funk, Del Realty Limited; Charles M. Lockwood, Faculty of Extension; Edward J. Chambers, M. James Dunn, and Roger S. Smith of the Faculty of Business Administration and Commerce; Guido A. Marini, Vice-President and General Manager, Toronto Dominion Bank; Roy E. Shannon of Smith, Matthews, Shannon; D.R.B. McArthur, Genstar Limited; and Walter H. Johns, former President, University of Alberta. There is a vacant position to be filled by a nominee from the Alberta Chamber of Commerce.

**CEA-Whitworth Award** The 1976 recipient of the CEA-Whitworth Award in Educational Research was Steve Hunka, Director of the Educational Research Unit in the Faculty of Education. Dr. Hunka is noted for his imaginative use of computers in educational research and as learning tools. The award was presented at the September meeting of the Canadian Education Association in Halifax.

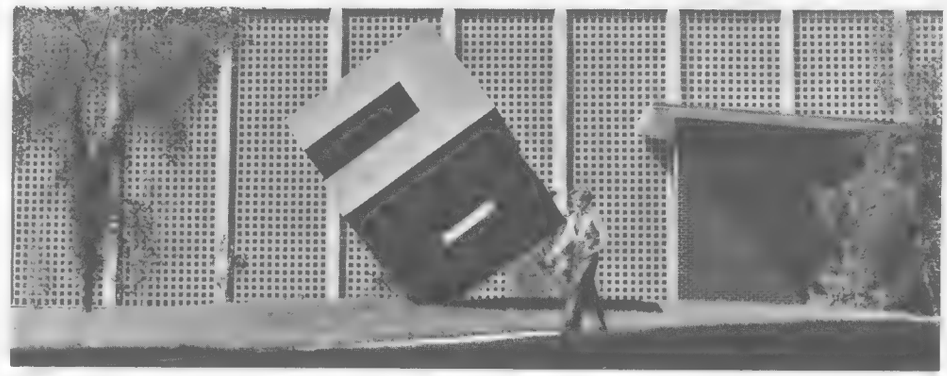
**Political Science grant** The University and the Department of Political Science received a major grant from the Department of National Defence to develop a centre of expertise in strategic studies. The grant is renewable for a period of five years and will be used to study questions of Canadian resource policy. Dan Middlemiss, formerly of the Institute for Strategic Studies at the University of British Columbia, has been hired as Research Director for the grant.

**Emil Skarin Memorial Fund** After discussions with University officials that took place over a considerable period of time, Mrs. Skarin gave the sum of $50,000 to the University to be held in perpetuity. The interest from this capital sum will be used for projects having an interest and value to the public as well as the University with an emphasis on the humanities and the arts.

**Admission quotas** The Board of Governors approved the following quotas for admission to faculties and programs in its June meeting. In most cases they are the same as in previous years:
Arts (for BFA Acting and Design Program), first year, 20 students; Dentistry, each of four years, 50 students; Dental Hygiene, each of two years, 40 students; Engineering, first year, 520 students, second year, 415 students; Law, a maximum of 500 students; Medicine, each of four years, 118 students; Medical Laboratory Science, first year, 32 students, second year, 24 to 26 students, third year, 36 students (12 from NAIT), fourth year, no quota; Post-graduate Clinical Training Programs, approximately 290 students; Nursing: Basic Program, 54 students; Nursing: Post Basic Program, first year, 72 students; Pharmacy, first year, 130 students; Rehabilitation Medicine, first year, in Occupational Therapy, 30 students, in Physical Therapy, 40 students, in Speech

Pathology and Audiology, 25 students; Library Science, first year, 30 students, down 15 from the previous year but the program shifts from one to two years in length.

**University art acquisition** Adjacent to the Education Centre is the University's most recent art acquisition, entitled "Kubos." Standing over thirteen feet high and constructed of 2½ tons of corten steel, the sculpture is the work of London, Ontario, artist Bill Gregory. The corten steel will gradually rust to give the sculpture a naturally eroded appearance and a deep russet color.



*Kubos*

**Kidney transplants** There has been a surprising and encouraging increase in the number of kidney transplant operations at the University of Alberta Hospital. During one weekend in August, for example, four people received kidneys from two donors. The two days of operations marked quite an accomplishment for the hospital's transplant team, which is composed of nephrologists, blood bank and tissue typing laboratory staff, nurses, operating room staff, and transplant surgeons. The University of Alberta Hospital serves as the kidney transplant centre in northern Alberta and the hospital receives notice of available kidney donations from other hospitals.

**Faculty of Business Administration and Commerce** Board members acted in response to the pressing need to introduce an enrolment quota in this Faculty that would reflect the imbalance between funding, instructional demands, and space availability. In June, Board members approved the following quota for 1976-77: first year students, 500 full-time students and 89 part-time students; second year, 496 full-time students and 62 part-time students; third year, 451 full-time students and 44 part-time students; fourth year, 426 full-time students and 57 part-time students.

**Donation of trees** Thirteen large specimen trees were donated by the University to the Muttart Conservatory. The donation, from the Botanic Garden, includes three "living fossils." These are the Dawn Redwood, which was known only as a fossil until 1942 when a team of Chinese botanists discovered a grove in inland China; the Ginko, which is no longer found in a wild state and is now best represented by stands in Japanese monasteries; and the Swamp Cypress, found in the swamps of the southeastern United States when it often grows standing entirely in water. The donated trees were used by the Department of Botany for teaching purposes but have been replaced by younger specimens.

**H.G. Glyde Studio** Opening ceremonies for the H.G. Glyde Studio Building were part of the fine arts festival in Banff this summer. Named after a former Chairman of the Department of Fine Arts at this University, the building houses an impressive number of studios as well as the Walter J. Phillips Gallery. The Gallery is noted for an innovative concept for the display of collections: works are featured on black walls and each painting is given individual emphasis by carefully mounted spotlights.

## Books

**The Censorship of English Drama, 1737-1824,** by L.W. Conolly, Associate Professor of English, has been published by the Huntington Library, San Marino, California.

**Superior Orders in National and International Law** by L.C. Green, University Professor of the Department of Political Science, has been published by Leyden-Sijthoff.

**Population at Microscale**, edited by L.A. Kosinski, Professor of Geography, and J.W. Webb of the University of Minnesota, has been published by the New Zealand Geographical Society and International Geographical Union, Commission of Population Geography, in Christchurch. The book is derived from an international symposium held at Massey University, Palmerston North, New Zealand, in December 1974.

**Federal Intervention in Public Education,** a monograph by Ernest Hodgson, Professor of Educational Administration, has been published by the Canadian Education Association.

**Overcoming Alienation in Work** by Alexander J. Matejko, Professor of Sociology, has been published by Sadhna Prakashan in Meerut, India.

**An Anthology of Ukrainian Poetry in Canada, 1898-1973,** compiled and edited by Yar Slavutych, Associate Professor of Slavic Languages, has been published by the Ukrainian Writers' Association Slovo. The book contains biographical and bibliographical sketches of forty-five poets and selections of their poetry.

**Essays on Western History** in honor of Lewis Gwynne Thomas, edited by L.H. Thomas, Professor of History, has been published by The University of Alberta Press. It is priced at $10 and is available from the University Bookstore.

**Orderly Marketing in the Alberta Broiler Chicken Industry** by J.H. Copeland, Analyst, and M.H. Hawkins, Professor, both of the Department of Rural Economy, has been recently published. The publication, derived from a study funded by the Alberta Agricultural Research Trust and the Alberta Broiler Growers'

Marketing Board, examines aspects of broiler chicken marketing, makes recommendations for guidelines to improve marketing and improve operational efficiency, and provides background to direct future research.

**People on the Move: Studies on Internal Migration,** edited by L.A. Kosinski, Professor of Geography, and J.W. Webb of the Universtiy of Minnesota, was published in 1975 in London, England, by Methuen. The book, which was derived from an international symposium held at this University in conjunction with the International Geographical Congress meeting in 1972, is on Methuen's list of best selling titles.

**Contemporary Issues in Political Philosophy,** edited by John King-Farlow, Professor of Philosophy, and William R. Shea of McGill Universtiy, has been published by Science History Publications of New York. The contributions include "What is a free society?" by Anthony M. Mardiros, Professor of Philosophy, and "An existentialist approach to politics" by Herman Tennessen, Professor of Philosophy.

**Trade and Underdevelopment: A study of the small Caribbean countries and large multinational corporations,** by Iserdeo Jainarain, Visiting Professor of Economics, has been published by the Institute of Development Studies, University of Guyana. The book is available from The Bookshop, University of Guyana, PO Box 841, Georgetown, Guyana.

**Fishes of the World**, by Joseph S. Nelson, Associate Professor of Zoology, is the first comprehensive modern classification of living fish species. The book is published by John Wiley and Sons of New York.

**The Organization and Administration of Education in Canada,** a collection of readings, has been edited by Professors of Educational Administration Ernest Hodgson, John Bergen, and Robert Bryce.

**Measurement in School Mathematics, 1976 Yearbook**, edited by Doyal Nelson, Professor of Elementary Education, has been published by the National Council of Teachers of Mathematics (NCTM). The publication is available from NCTM, 1906 Association Drive, Reston, Virginia 22091.

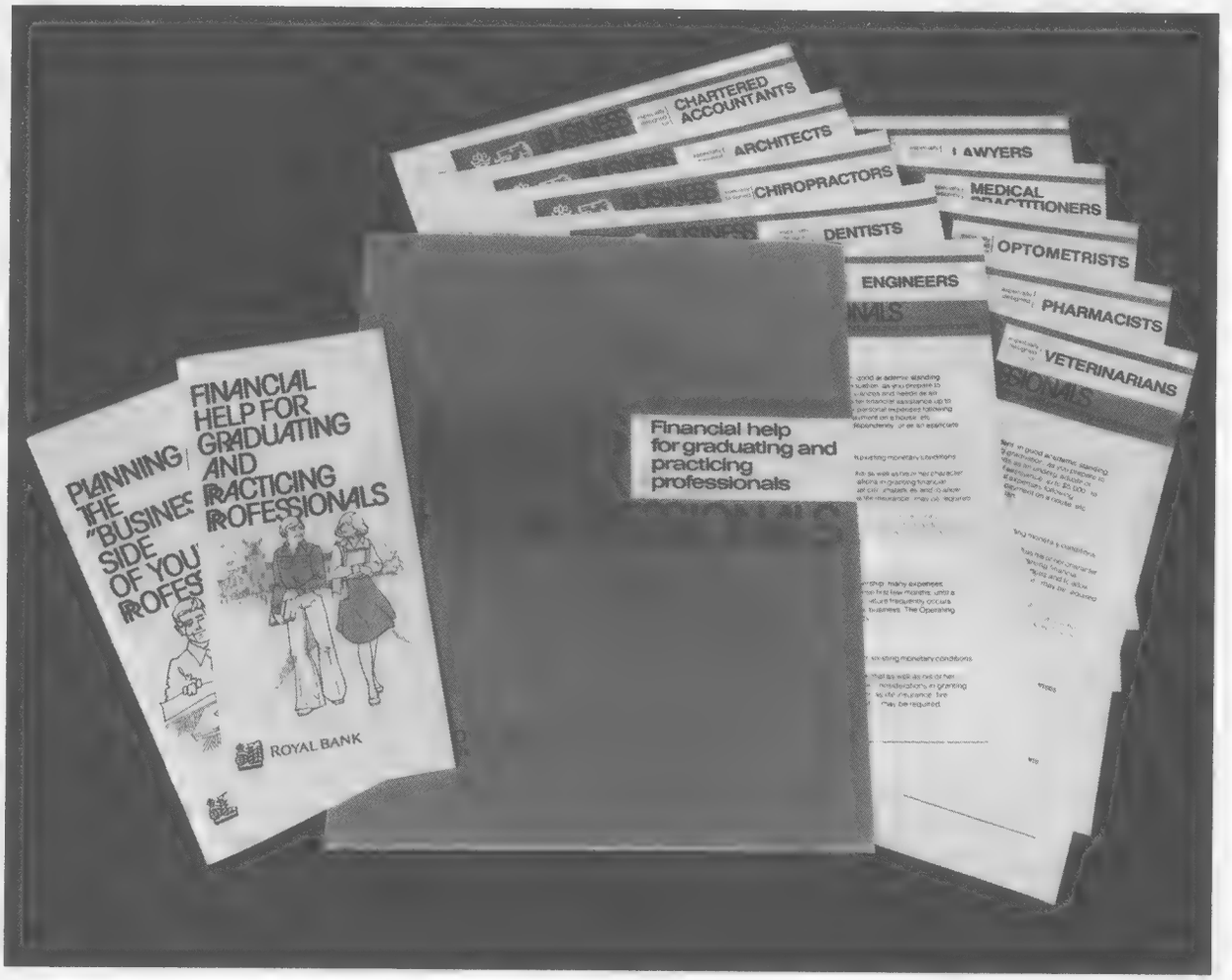
## New Deans

**Charles H. Davis**

Charles H. Davis was appointed Dean of the Faculty of Library Science in August. A former Associate Professor at the School of Library Science of the University of Michigan in Ann Arbor, Dr. Davis has an interest in computer programming for information processing with emphasis on the application of higher level languages for primarily non-numerical computations. He holds a BSc in chemistry and a master's degree and a PhD, which concentrated on library and information science, from Indiana University. The honors Dr. Davis has received include election to the Phi Lambda Upsilon Honorary Chemical Society and to Beta Phi Mu, its library science counterpart, and selection as a German Government Fellow for 1960-61.

**Amy Elliott Zelmer**

Amy Elliott Zelmer became Dean of the Faculty of Nursing in August. Employed in New Delhi, India, with the World Health Organization, Dr. Zelmer was formerly an Assistant Professor of Nursing and served as the Chairman of Nursing for the University's continuing education programs. She attended Dalhousie University from which she obtained a diploma in public health nursing. She received her master's degree in the field of public health in 1963 and her PhD in adult education from Michigan State University in 1973. Dr. Zelmer is a member of various professional associations and societies.

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# the alumni

**'22**

The honoring of **Arthur G. Scroggie**, *BSc*, fifty years a member of the American Chemical Society, was recorded recently by *Chemical and Engineering News*. Dr. Scroggie was one of four men in the original class that took honors in Chemistry under the late Dr. Lehman in 1922.

**'23**

One other original member of Dr. Lehman's Chemistry class was **B.J. Mair**, *BSc*, similarly honored by the American Chemical Society.

**'31**

The Canadian Foundation on Alcohol and Drug Dependencies recently gave a distinguished service award to **J. George Strachan**, *LLB*, for his work in combating alcohol and drug addiction.

**'34**

In German universities there is a tradition of honoring a senior professor with a *festschrift*, a book of original essays by colleagues or former students. Recently the *festschrift* tradition came to the University when retired History Professor **Lewis Gwynne Thomas**, *BA*, was honored at Rutherford House.

**'38**

**Donald E. McLeod**, *BA*, has been appointed Vice-President of Public Affairs and member of the executive committee for Air Canada.

**'40**

**C.D. Williams**, *LLB*, is Vice-President, Secretary, and General Counsel for Westcoast Transmission Company Limited, with headquarters in Vancouver. **O.J. Walker**, *BA*, Director of Research and Technical Services for Consolidated-Bathurst Limited, was the cover personality for the company's April in-house publication. **George L. Murray**, *LLB*, has been appointed a Judge of the Supreme Court of British Columbia.

**'42**

**Ruth McClure**, *BSC(Nu)*, is retiring from the Faculty of Nursing after being Director for eighteen years and Dean for one. Ms. McClure is currently assisting the University Nurses Alumnae to complete a history of the two schools of nursing—the University's and the University Hospital's. **George Ford**, *BSc(Eng)*, has stepped down as Dean of Engineering. He intends to continue teaching and to do some private consulting. **G.L. Berry**, *BA*, Chairman of the Department of Secondary Education, has been appointed to the Curriculum Policies Board of the provincial government. Dr. Berry will represent the post-secondary education sector and will serve for one year. **Earl W. Buxton**, *BA*, has retired as Professor of Secondary Education in English after having been with the Faculty of Education for twenty years. **J.C. Gordon Brown**, *BA*, has been named Consul-General in Seattle.

**'43**

After having served as Director and Dean of the Faculty of Household Economics for sixteen years, **Elizabeth Empey**, *BSc(HEc)*, is retiring. **Raymond U. Lemieux**, *BSc*, is serving an initial three-year term on the governing body of the National Research Council of Canada.

**'44**

**John E. Myers**, *BSc(Eng)*, Professor of Chemical Engineering at the University of California, Santa Barbara, has been appointed Dean of the College of Engineering. **Harry Hole**, *BSc(Eng)*, is a Director of the Bank of Commerce.

**'46**

After twenty years of service with the City of Edmonton, Commissioner **Stan Hampton**, *BSc(Eng)*, has taken an early retirement.

**'47**

**Marguerite Lambert Lang**, *BSc*, is a Fellow in the Division of Pesticide Chemistry, American Chemical Society, with headquarters at the Department of Health and Environmental Research, Dow Chemical Company, Midland, Michigan. As Chief Clinical Psychologist, **Roberta B. Kiefer**, *BEd*, is located at St. Elizabeth's Hospital, Washington, DC.

**'48**

Agriculture Minister Eugene Whelan has announced the appointment of **Michael Heney**, *BCom*, as Assistant Deputy Minister (Production and Marketing). Mr. Heney was formerly coordinator of the trade department's grain group. **Arthur B. Metzner**, *BSc(Eng)*, Chairman of the Department of Chemical Engineering at the University of Delaware, has been appointed a member of the corporation visiting committee of the Massachusetts Institute of Technology (MIT) Chemical Engineering Department. The Marketing Manager of Ontario Hydro, western region, is **George F. Brunet**, *BSc(Eng)*.

**'49**

"Returning to Canada after twenty-two years" in Peru states a card from **Hugh Hay-Roe**, *BSc*, now with Canadian Superior Oil Limited in Calgary. **Victor Chanasyk**, *BSc(Ag)*, founder of the first school of landscape architecture in Canada, was honored recently in traditional style by the Vegreville community. **Jack Stabback**, *BSc(Eng)*, a member of the National Energy Board for the last eight years, is currently serving as Vice-Chairman. **William H. Price**, *BSc(Eng)*, is serving the dual role of Executive Vice-President and Director of Colonial Oil and Gas Limited.

**'50**

A note during the past summer from **William W. Parker,** *BEd*, artist and educator, anticipated that 1976 would be his "golden Harvest year." **Tevie H. Miller**, *LLB*, exchanged his purple-trimmed robe for a scarlet one recently, when sworn in as Alberta's newest Supreme Court Justice. **George Hughes**, *BSc(Ag)*, has moved from Edmonton City Hall and is now General Manager of the Edmonton Exhibition Association. **Gordon Peacock,** *BEd*, has returned for one year to take over the Chairmanship of the University's Drama Department.

**'51**

After twenty-six years teaching in Vegreville, **Alex Gordey**, *BEd*, is retiring. **Manoly Lupul**, *BEd*, is Acting Director of the newly established Canadian Institute of Ukrainian Studies on campus. **W.A. Doug Burns**, *BA*, Assistant Registrar and Admissions Officer, is President of the Association of Registrars of Universities and Colleges of Canada. **Lionel E. McLeod**, *MD*, Dean of Medicine, University of Calgary, is Chairman of the Board of the Canadian Council on Hospital Accreditation. An Outstanding Achievement Award was given recently to Dr. McLeod by the Medical Alumni Association. **W.L. Garth Greenaway**, *BSc*, retired from Canadian Forces, is now Personnel Manager, Neonex Shelter Industrial Division, Spruce Grove, Alberta. Mobil Oil Canada Limited has **R.J. Nicholl**, *BSc*, as its Planning Manager.

**'52**

**Sid Lore**, *BSc(Ag)*, Livestock Commissioner, has returned from eastern Indonesia where he was studying the area's livestock production and making recommendations to the Indonesian government for improvement. **Ernest Kanasewich**, *BSc*, Professor of Physics, has been

elected to Fellowship in the Royal Society for his work in earth science. **A. Lawrence Brent**, *BSc(Eng)*, has opened a petroleum consulting office in Calgary, offering reservoir engineering, geology, and economics.

**'53**

**Shirley M. Stinson**, *BSc(Nu)*, Professor, Faculty of Nursing and Division of Health Services Administration, is First Vice-President of the Canadian Nurses' Association. **Violet P. Henry**, *LLB*, Director of Manpower Planning and Staff Development for the YMCA, Chicago, has been appointed Executive Director of the National Council of Young Men's Christian Associations' Organization, Development Group. Ms. Henry is the first woman to be named to a top management position in the national YMCA.

*Violet P. Henry, LLB'53*

*J.H. Daniels, BSc(Eng)'55*

**'54**

The University of New Brunswick has appointed **Irene Leckie,** *BSc(Nu)*, as Assistant Dean, Faculty of Nursing. The 1976 CEA-Whitworth Award in Educational Research has been awarded to **S.M. Hunka**, *BEd*, University Coordinator of Education Research Services.

**'55**

**Tom Peacocke**, *BEd*, Chairman of the Drama Department at the University and Head of Drama at the Banff School of Fine Arts, is calling it quits to return to teaching. A graduate with distinction, **J. Hartley Daniels**, *BSc(Eng)*, has been promoted to full Professor of Civil Engineering at Lehigh University.

**'56**

The former General Manager of Edmonton Water and Sanitation, **Phil Walker,** *BSc(Eng)*, is now the city's Commissioner of Utilities and Engineering. Senior executive positions have been announced by Poole Construction Limited with **N.J. Oneschuk**, *BSc(Eng)*, as Senior Vice-President (Buildings). CDC Oil and Gas Limited has **J.F. Macleod**, *BSc(Eng)*, as its Production Manager.

**'57**

An investigation that began thirty years ago in Latvia and led to Sweden, Canada, and the countries on the rim of the Mediterranean is nearing an end for **Karl Lesins,** *PhD*, a seventy-year-old Professor Emeritus of Genetics who has applied to license Ellerslie 1, a new alfalfa strain able to pollinate and fertilize itself. The search for self-pollinating alfalfa has involved countless hours for Dr. Lesins in laboratory trials, study of the medicago family, and field trials at the University's Parkland and Ellerslie farms. Amoco Canada Petroleum Company Limited has **Daryl E. Birnie**, *MSc(Math)*, as its Chief Geophysicist. **Harold C. (Hal) Dickout,** *BSc(Eng)*, is Manager of the Small Motor Section of Canadian General Electric, Peterborough, Ontario. After marking thousands of students' essays, **John Hawrelko**, *BEd*, decided to try a little creative writing of his own. As a result, the Redwater resident won first place recently in a short fiction competition. Mr. Hawrelko's winning story, "Home," deals with a man's search for himself.

**'58**

**Ernest M. Tetreau**, *BSc(Eng)*, is Vice-President (Operations) with Atlantic Richfield Canada.

**'59**

**B.H. Sanderson,** *BSc(Eng)*, is responsible for all treasury functions, Alberta Natural Gas Company. The new Senior District Agriculturist at Spirit River is **Miles Kuryvial**, *BSc(Ag)*. **Walder White**, *LLB*, has been appointed Senior Judge for Family and Juvenile Courts in Red Deer. **R.S. (Bob) Patterson**, *BEd*, has been appointed Associate Dean (Planning and Development) on a half-time basis at the University for an initial period of twelve months. His primary commitment will be to leadership and coordination in a review of the BEd degree and certification programs and for such planning as may be necessary with Academic Plan 10 and enrolment quotas. **Allan Gibb**, *BEd*, has been appointed Assistant Superintendent, Red Deer Public School system.

**'60**

**Kathleen A. Dier**, *BSc(Nu)*, is a consultant with the World Health Organization, Faculty of Public Health, University of Mahidol, Bangkok.

**'61**

Canadian General Electric has announced the appointment of **Kenneth L. Lyons**, *BSc(Eng)*, as Manager (Marketing), Lamp Department. **Ken F. Campbell**, *BCom*, is Chief Executive Officer and Managing Director with Zeidler Forest Industries Limited. Moving from his post of Controller, **William Gilbertson**, *BCom*, is now Vice-President (Finance and Administration), Alberta Housing Corporation. **Bill Robertson**, *BSc(Eng)*, has been appointed Manager (Distribution) for Cominco, Vancouver. **Jack I. Clark,** *MSc*, is serving a dual role with R.M. Hardy & Associates as Vice-President and Chief Technical Officer.

**'62**

A recent appointment with Norcen Energy Resources has **Donald I. Walker**, *BSc(Eng)*, as Assistant General Manager (Oil and Gas Production). **D.A. Grant**, *BSc(Eng)*, is Vice-President and General Manager, Saskatchewan division of Labatt's Breweries of Canada.

**'63**

**Walter C. Harrison**, *BSc(Eng)*, has been appointed Head of the Systems Analysis Branch, Atomic Energy of Canada Limited, Pinawa, Manitoba. **R. Guy Passey**, *BSc(PE)*, is coaching the Taber Palace Pats Junior B hockey team. Mr. Passey is the Provincial Director of the Alberta Schools Athletic Association and executive

member of the ATA Specialist Council for Physical Education.

**'64**

Chairman of the University of New Brunswick's Social Science Division is **Robert Edward Garland**, *MA*. Assistant to the President of Alberta Natural Gas Company Limited is the title of **Gordon T. Noland,** *BCom*. Burns Foods has **Robert G. McDonald,** *BCom*, as Controller. The publishing firm of John Wiley and Sons Incorporated, New York, has announced the publication of *An Introduction to Probability Theory and Mathematical Statistics* by **V.J. Rohatgi**, *MSc*. If **Chuck Moser,** *BSc(PE)*, has his way, the athletes participating in the Commonwealth Games in Edmonton in 1978 will get the red-carpet treatment. Mr. Moser, Coordinator of the men's athletic program at the University, is Chairman of the Commonwealth Games Foundation division responsible for arrangements for the athletes' village. While women make headlines for breaking into all-male career strongholds, some men are quietly moving into professions traditionally dominated by women. For the first time a male has assumed the directorship of the University of Guelph's Family Studies Laboratory Schools. **Bruce Ryan**, *BA*, the new Director, doesn't expect a sudden influx of men into pre-school, daycare, or early education studies, but he predicts a gradual increase of men in the field. **Donald E. Plewes,** *BCom*, is Director of Retail Operations for Laura Secord and is responsible for 230 shops across Canada.

**'65**

**Gordon Bulat**, *BSc(Eng)*, has been appointed Director of the Department of Physical Plant heading a staff of 500 full-time and 250 part-time employees. The Geological Manager for Petro-Canada is **Ernest E. Pelzer**, *PhD*.

**'66**

The Toronto *Star* recently referred to the "Meditation Machine," a revolving bed designed by **David John Graham**, *BSc(Eng)*. The bed is intended to help people enjoy the spiritual experiences formerly available only to religious mystics; meditators lie on the bed, which revolves clockwise in a horizontal plane, while an electro-magnetic current is passed through the body. From Nairobi, Kenya, there was an interesting note recently from **Russell Schnell,** *BSc*, "who enjoys reading of the accomplishments and diversity of occupations my university acquaintances pursue." Dr. Schnell has been appointed Director, United Nations Mount Kenya Climate Station Feasibility Study, United Nations Development Program Office, Nairobi, Kenya. At this location, says he, "my wife and myself would be pleased to host and aid travelling U of A acquaintances who may be in Kenya." **Duncan Cameron**, *BA*, has been named Assistant Professor in Political Science at the University of Ottawa.

**'68**

**John Eric Eisner,** *DDS*, is Assistant Dean at the New Jersey College for Dentistry and Medicine, Orange, New Jersey. Dr. Eisner recently received a PhD from the University of Michigan in the field of specialization-education. **Brian Colgan,** *BSc(Ag)*, is Agriculturist at Leduc. **P.J. Atherton,** *PhD*, Professor of Educational Administration and Coordinator of Graduate Studies and Research, Queen's University, has accepted an appointment as Dean of the Faculty of Education, Brock University.

**'69**

**John N. Sabwa**, *BA*, is in the marketing headquarters, East African Airways, Nairobi. Located at Des Moines, Iowa, **J.C. Hill,** *BSc(Ag)*, has been appointed General Planning Manager (Tractors) for Massey-Ferguson. **David Estrin,** *LLB*, Toronto lawyer, rides his bicycle to work or travels on the subway as befits the first Canadian lawyer with a private practice totally in environmental law. **Terry Fikowski,** *BA*, is no longer Project Manager for Alberta Housing Corporation but Northern Regional Manager of Alberta Home Mortgage Corporation, Edmonton. **Gwen S. Newsham,** *MD*, is on the staff of Concordia University, Montreal. She is the co-author of a recent book, *Matiere et Maniere, Beyond the Sentence*. **W.H. McLean,** *BSc(Eng)*, has announced the formation of a construction company for the purpose of carrying out commercial, industrial, and institutional construction.

**'70**

**R. Wayne Jollineau,** *MBA*, is Chairman of the Division of Administration, University of New Brunswick. **Peter Stryker,** *BSc(Ag)*, is Assistant Director of Parks and Recreation, Moose Jaw.

**'71**

**John Tackaberry**, *BSc(Ag)*, is at Valleyview as Senior District Agriculturist. **Mary St. Pierre,** *BSc*, is Executive Assistant to Jim Foster, Attorney-General of Alberta.

**'72**

Pacific Petroleums Limited has announced the appointment of **Jane (Haney) Coull**, *LLB*, as Executive Assistant and Assistant Secretary to the company, Calgary. **Brian Mauza**, *BSc(Ag)*, is with the British Columbia Department of Agriculture, Cloverdale.

**'73**

**Peggy Overton,** *BSc(Nu)*, is Assistant Professor, full-time research, in the Division of Health Services Administration at the University. Farmers and Merchants Trust has announced the appointment of **Janna Medway**, *LLB*, as company Secretary. **Ken K.S. Mah,** *BSc(Pharm)*, is enrolled at the Illinois College of Podiatric Medicine, Chicago. **Ross Purdy,** *BSc(Ag)*, is Assistant Manager (Farm Services) for Scotiabank, in Alberta. Of nine Inco Limited post-graduate research fellowships in science and engineering, one was given to **Karol Szklarz,** *BSc*.

**'74**

**Geoffrey Ross Tate**, *BSc*, is associated with Imperial Oil Limited, Toronto. **Gail Lemke**, *BSc(HEc)*, is Home Economist at Evansburg, Alberta.

**'75**

**Doreen Scott**, *BSc(Nu)*, the author of this month's "Connection," is Program Coordinator for the Department of Nursing at the Alberta Hospital, Ponoka. **Diane Bourne**, *BSc(HEc)*, has been appointed District Home Economist at Sedgewick.

**'76**

**Donna (Ingram) Prokopczak**, *BSc(Nu)*, is a consultant with 3M Company in the Medical Products Division and Head Nurse of the Operating Room Administration at the University of Alberta Hospital. **Ken Motiuk**, *BSc(Ag)*, is located at Vegreville as Agricultural Economist. **Barry W. Anderson,** *BEd*, is a member of the teaching staff at Foremost. **Donna C. Lordon**, *BA*, is lecturing in the Faculty of Nursing, University of New Brunswick. A former social worker for the municipality of Ottawa-Carleton, Mrs. Lordon received her nursing education in Halifax.

## Message from the Alumni President

Every service organization has an image problem. The Alumni Association is no exception.

Last February it set about "testing the waters" with an Alumni Opinion Questionnaire to a controlled sampling of 2,000 graduates, encompassing all years, all faculties, wherever they reside in Canada.

The returns rolled in, and predictably the reactions were varied; from the "University Alumni Association is doing a very capable job of keeping me informed. The problem lies with myself and others for not becoming involved" to a "Need for *clear* statement of objectives, responsibilities, and functions. Need to become an organization which can *provide* graduates with *observable benefits* if it is to *expect* wider support."

We would thank the questionnaire respondents for their replies—recommending new, and reinforcing current, programs of organized alumni support and endeavor. The Association's purpose, "to promote the welfare of the University," remains constant. How best to accomplish this aim within the explosive context of expanding graduate numbers is the challenge of the Alumni executive.

I would assure our alumni readers that we are constantly in a state of rebuilding, reshaping, and rethinking the Association's program. Our endeavor is not only to stimulate interest and involvement of graduates in the life of their Alma Mater, but to fashion an Association that will appeal to a wide spectrum of graduates, diverse in age, and just as varied in interests and talents.

Bernard S. Adler

*Bernard S. Adler, DDS'47*

## Alumni Executive Committee 1976-77

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Clarence Wanchulak

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Doreen Al-Adra

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Andy Andrekson

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R.J. Edgar

Physical Education
Chuck Moser

Science
Brian Silzer

Grande Prairie
Frank Kozar

Vegreville
Bud McEwen

Red Deer
Judy O'Brien

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**Ex-Officio**
Lois Foote
Alma Mater Fund

John Cherwonogrodzky
President, Graduate Students' Association

Len Zoeteman
President, Students' Union

Kevin Gillese
Editor, *The Gateway*

## Alumni Executive Committee Meetings 1976-77

**Tuesday, 7 September 1976**

Introduction of new members
Minutes of Annual Meeting
Report—fall/winter program

**Tuesday, 5 October 1976**

Guest speaker—William Preshing,
Director, Institutional Research and Planning

**Monday, 1 November 1976**

Guest speaker—Ron Dalby,
Chancellor, University of Alberta

**Friday, 26 November 1976**

Reception and dinner (Christmas party)

**Monday, 10 January 1977**

Standing Committee Reports

**Monday, 7 February 1977**

Discussion—Students' Union
Welcome—Alumni Class Representatives 1977

**Monday, 7 March 1977**

Special guests—New Deans

**Tuesday, 12 April 1977**

Pre-Annual Meeting wrap-up
Reports—Standing Committees

## Remember the years . . . share them again

The history of the first fifty years of the University Schools of Nursing is soon to be published.

A committee of retired and semi-retired alumnae members received a New Horizons Grant from Health and Welfare Canada to enable this very worthwhile project to be undertaken. Announcement of the grant was made at the Fiftieth Anniversary banquet in November 1974. It is a good story about the development of nursing education at the University of Alberta. It is a story about people, students, graduates, and many others who influenced the education of nurses. Written by award-winning author, Betty Wilson, the book recounts the full story of fifty memorable years.

Advance orders are now being received at a special pre-publication price of $10. Cheques should be made payable to: Faculty of Nursing, University of Alberta, 3-119 Clinical Sciences Building, Edmonton, Alberta T6G 2G3.

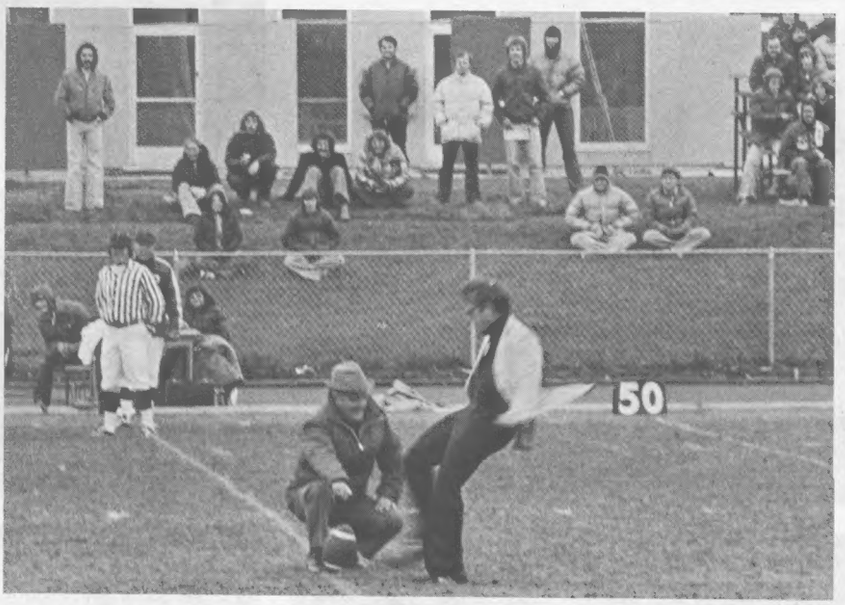
## In Memoriam

**Marjorie Hall Hotson,** *BSc'19,* in Vancouver.
**Donald J. McKinnon,** *BSc(Ag)'23,* former member of the Alberta Legislature, in Calgary.
**Betty Mitchell,** *BSc'24, LLD'58,* dramatist, in Calgary.
**Robert A. Mawdsley,** *BSc(Ag)'25,* in Victoria.
**Edna (Eubank) O'Brien,** *BA'25,* in Edmonton.
**Cyril O'Donnell,** *BCom'24, MA'26,* in Los Angeles, California.
**Charles V. Jeffery,** *BCom'26,* in Jasper.
**W. Wallace Miller,** *BSc(Ag)'26,* in Carmangay.
**Joseph William Bainbridge,** *BA'21, MA'22, BD'27,* well known for his United Church ministry in Alberta since 1919, in Calgary.
**Percy Harry Sprague,** *MD'27,* prominent physician, in Edmonton.
**Marjorie (Lundy) Evenson,** *BSc(Nu)'30,* in Edmonton.
**William Earl Bowser,** *BSc(Ag)'30,* eminent agrologist, in Edmonton.
**Stephen M. Schmaltz,** *MD'32,* long-time member of Alberta's medical community.
**Christena Manser,** *BA'38,* in Edmonton.
**Ottar Massing,** *BA'39,* well known in educational circles, in Edmonton.
**Jean (Campbell) Wright,** *BSc(Nu)'39,* in British Columbia.
**James R. Levy,** *BA'40, BEd'45,* one of the first teachers at Victoria Composite High School, in Edmonton.
**Stewart Ronald Sinclair,** *BSc(Eng)'44,* University professor in Civil Engineering.
**Henry G. Ward,** *BEd'46,* long-time city school principal and active in historical work, in Edmonton.
**Margaret (Grisby) McConechy,** *BSc(Nu)'47,* in Scarborough, Ontario.
**Dan D. Bouvier,** *MD'45,* following a farm accident at Lac La Biche.
**Francis Charles Pollard,** *BA'59,* in Edmonton.
**Kerry C. Henderson,** *BCom'64,* in a yachting accident on Lake Michigan.
**Helen Inez Tuomi,** *BEd'66,* in Edmonton.

## Homecoming 1977

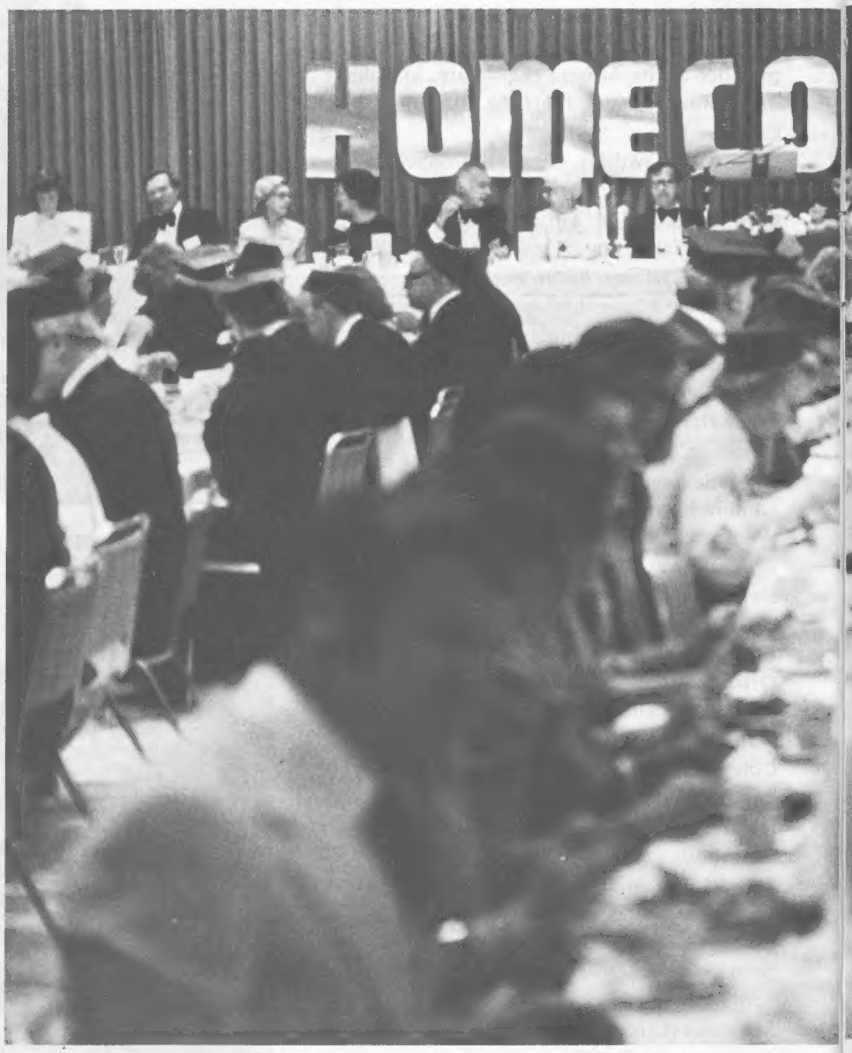
Next year, Alumni Homecoming will be held Friday and Saturday, 7 and 8 October. Anniversary classes will be '17, '27, '37, '52, '57, '67, and '72.

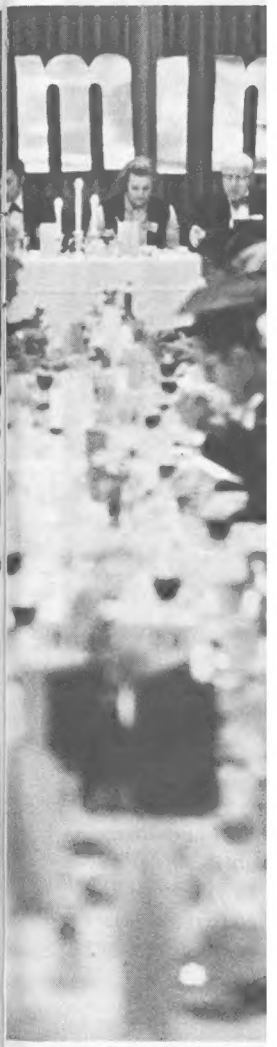
## Homecoming 1976

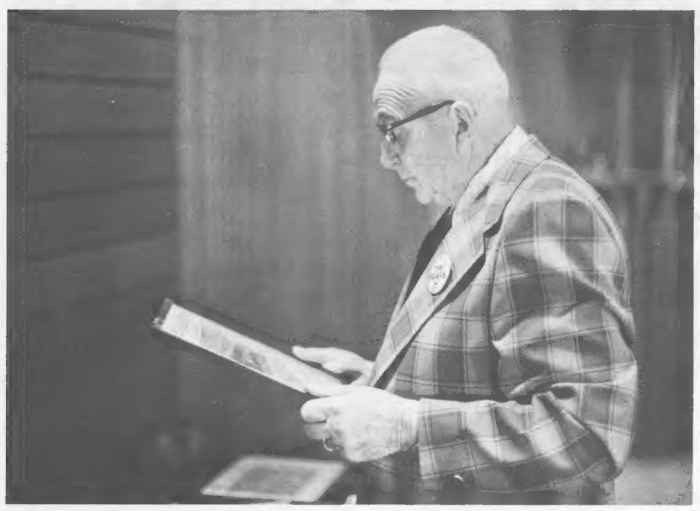



**Still Winning** *(top) There was a sharp autumn tinge in the air when the Golden Bears met the University of British Columbia Thunderbirds successfully on Alumni Homecoming Weekend. Bundled up amid others and vociferous in their support were two "Golden" football stars, Charles Laverty, BA, of High River, and D.P. McDonald, BA, of Calgary, representing the Provincial Football Champions of 1926.*

**The Record** *(bottom) The Honourable Pierre Trudeau, Prime Minister of Canada, established an official kick-off record on the University grid in 1968. The Chancellor, Ron Dalby, seen in good head-down Homecoming form, has been trying to exceed it ever since. There will be another opportunity in 1977.*







**Silver and Gold** *Responding to toasts to the Silver and Golden Graduates at the Alumni Homecoming Banquet and Ball were distinguished members of the legal fraternity. President of the Students' Union in 1951, His Honour Mr. Justice Michael O'Byrne (top left), braved the dinner buns of his Silver classmates. Somewhat more subdued, but nevertheless in excellent form, Frank Newson, QC (centre left), echoed the warm feelings of the Golden Class and their spouses.*

**Old Yearbooks** *(bottom left) A handsome display of old Yearbooks annually attracts the interest of graduates at the Pre-football Homecoming Luncheon in Lister Hall.*

**Golden Mementos** *About thirty Golden graduates (Class of '26) and their spouses returned for Alumni Fall Homecoming. At the concluding Banquet and Ball, golden mementos were presented to each, compliments of the General Alumni Association. Seen with Chancellor Ron Dalby are Anna (Wilson) Sharpe, BA, of Ottawa (centre); Winnifred J. Moyle, BSc(HEc), of Toronto (top right); Bill Cook, BSc(Ag), of Ottawa (centre right); and Nicholas C. Strilchuk, MD, of Mundare (lower right).*

*Graduates at*
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*Nicholas C.*

## A Golden Postscript

*Doing it all over again. The Class of 1925 met on campus two falls ago to observe a Golden Anniversary milestone. The whole affair was such a resounding success that it was decided there should be a reunion postscript. Dartmoor Ranch at Alix, Alberta, was the site with hostess Bea (Buckley) Parlby, BA'25, centre, displaying the anniversary class cake. Classmates and other well wishers shared a most hospitable summer day. Standing (left to right): Eric Cormack, BSc(Ag)'25; Rose Markle; Ted Maine; Barbara (Villy) Cormack, BA'24; H. Willison; and Alex G. Markle. Seated (left to right): Mary Willison, BA'25; Bea Parlby; Phyllis (McBeath) Mayne, BSc(HEc)'25.*

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